AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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March.

"Not only through the lenient air this change,
Delicious, breathes; the penetrative sun,
His force deep-darting to the dark retreat
Of vegetation, sets the steaming power
At large, to wander o'er the verdant earth,
In various hues; but chiefly thee, gay green!
Thou smiling Nature's universal robe." THOMSON.

There is a feeling of relief, as we reach the first day of Spring, and look back upon Winter as a matter of history. It is very comfortable to remember its frosts and storms, the sheeted earth and frozen streams, as things of the past. Whatever appliances we may use to make the Winter tolerable, it is still a period of endurance, and the farewell with which we dismiss it, is one of the few occasions in which that word sounds pleasantly to the ear. The most enthusiastic lover of sleigh rides and snow banks, skating and ice, is content to put up the sleigh, and fold up the winter furs, and to lay aside the burnished skates. The school boy houses his sled, and lays up the curling stick with a pleasure like that he feels when he takes them out for the winter campaign. The farmer draws his last sled-load of wood over the melting snow with a calm satisfaction, and is hardly displeased if it be left half way home upon the bare field, like Noah's ark on dry land. We all feel that there is something better ahead than the Winter has afforded us. Art has no power to compensate us for what we are deprived of, in the season of storm and snow. We manage to make the dwelling very comfortable by stoves and furnaces, but it is a welcome sound when the last clinker is rattled from the grate, and the furnace door creaks for the last time on its unoiled hinges, and we are glad to have the universal self-acting heater do its appointed work. We hail the lengthening of the days with a rapture that we never feel when the nights grow longer, and the darkness breaks off our unfinished task. And we do this without a thought of economy. It is true that the sun saves in the bills for light and fuel, but how few welcome the Spring with the thought that it will save coal, wood, gas, oil, or tallow candles! Instinctively we hail the opening days of Spring as good and beautiful in themselves. There is no heat like that which the sun gives, and no condition of the atmosphere so genial and enjoyable as that which the sun makes. There is no light so pleasant to the eye as the light of day. Houses are necessary evils, with all their contrivances for heating, lighting, and ventilation. We are glad when we can have twelve hours of sunlight, when we can throw open doors and windows, and drink in sunlight and fresh air, like the birds and plants.

The Winter creates dangers and difficulties which must be met and overcome, to make life at all comfortable. A good part of the Summer is spent in toil to get ready for Winter, and gives birth to an almost endless variety of industry, to meet its necessities. The plow, the loom, and the anvil are all busy, weaving, tilling, forging, to make the season endurable. The discipline under this hard master is invaluable, and it is probably for this reason that so large a portion of the human race have had their lot cast in the temperate zones. Here we find the best types of the race. They have had to struggle for a subsistence, and the conflict with frost and storm, darkness and tempest, has made them strong and heroic. We love to think of the peaceful victories of the ax, and the plow, and of all the wonderful inventions that soften the rigors of Winter, and bring us to the Spring fully prepared for its enjoyment.

These patches of bare earth, we hail them like the faces of old friends coming back to us after long absence. There is a new odor in the atmosphere, though the fields are barren, and not a flower has bloomed. Is it fancy deluding the sense, and bringing up from the yet frozen earth the breath of snow-drops and violets? There is music upon the air, though we see no bird yet perched upon the tree under our window, and the children have not announced the first note of the blue bird, or seen the first robin. It is the trickling song of the eaves, as the snow dissolves from the roof. It is the ripple of the rills as they run by every road side, carrying off the snow banks. It is the softer murmur of the wind from the "sweet south," wooing the buds in every tree top, and whispering to the yet slumbering grasses in the meadow.

We perceive all these things as we look upon the outer world from our loop-hole of retreat. And if we venture forth and hold closer communion with nature, we have still stronger evidence that the reign of Winter is over. We see it in the warmer glow of the sun at his rising and setting. We feel it in the air. Here on the sunny side of the wall, where the snow lay but yesterday, the grass has already started. Lift the covering from the flower border, and you see that the crocuses have already felt the breath of Spring, and are thrusting up their green lance points. There is a busier air in the farmyard—cocks crowing with fiercer defiance, hens cackling in more obstreperous declaration of new laid eggs, gobblers strutting with redder heads and broader tail feathers, geese hissing at all intruders, and ducks holding a convention on family affairs in every puddle. Here are lambs just dropped, and calves frisking with tails erect, and frothy mouths, guilty of fresh drawn udders. There must be green grass not far ahead for all the new mouths that are opening to crop it.—This attitude of faith and expectation in every living thing, should be cherished by the husbandman. Nature puts honor upon this faith, in every germ that shoots up from the bosom of the earth, in every thing that moves upon its surface. The grass finds abundant aliment, and fills every hungering stomach.

We need, as a class, a much larger faith in our calling. Nature will honor all our drafts upon her bounty, and meet our largest expectations, if we work according to her laws. Here, as in a higher sphere of toil, "he that doubteth is damned." Many a busy toiler upon the farm is kept poor and discouraged by half way measures in husbandry. He has not a large-hearted, generous confidence in the capacities of the soil to reward the capital and labor he expends upon it. There is sunshine enough, and rain enough, and almost food enough, on every acre of soil, to give seventy bushels of corn, if it be skillfully managed. Sometimes it is draining, sometimes deeper plowing, sometimes more tillage, and oftener more manure, that will supply the deficiency, and give full crops. Whatever the want, it should be generously met, that we may reap the full reward of our toils. Half-way plowing, manuring, and tillage, show us skeptics in husbandry. The grand principle, so true in our spiritual relations, is quite as true in our relations to the noble art of agriculture: "Give and it shall be given unto you: good measure, pressed down, and shaken together, and running over." The genial air of the Spring should thaw out the crust of our unbelief, and make us devise liberal things for the soil.

Calendar of Operations for March, 1862.

[A glance over a table like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 43°; but will be equally applicable further North and South, by allowing for latitude.]

Farm.

Sunshine and the south wind struggle with the frosts and gales of Winter, and Spring asserts this month her right to rule. The thousand trickling rills, starting under the snow banks and gathering fresh strength and many drops from every softening sod, make hill-side and meadow musical with their liquid voices, giving man notice that water and frost have quit their hold upon the soil, and calling him to his labors. A few degrees south of New-York City, the month of March is really the beginning of Spring but in northern New-York, New-England and the North-West, Winter, and good sleighing, often continue nearly through the month. On warm well drained land work can not commence too soon after the frost and water are fairly out of the soil, but heavy soil is often injured by working while it is wet.

Buildings—Make provision for the increase of the herd and flock, and attend to inside repairs, painting, etc. Delay outside painting until next month. Heavy rains accompanied by wind will injure a coat of fresh paint.

Cattle—Some succulent food is very important to the health of all kinds of stock. Feed a few roots, mangels or rutabagas, daily. Separate cows near calving from the others, giving them wide roomy stalls or boxes. Keep watch to render assistance if necessary. Working oxen must be well fed and not allowed to overwork at first.

Cellars—Clean out decayed vegetables, superfluous sand, or lumber. Whitewash with a simple lime wash, to make them lighter, sweeter, and more healthy. Keep barrels, tubs, etc., where they will not dry or decay.

Clover—May be sowed at any time during the month—best when the ground is frost cracked on a still morning, or else upon new fallen snow, as the seed may then be seen and it can be more easily sowed.

Drains—Should be examined as soon as the frost is out of the ground to see that there are no obstructions. Wet spots in drained land indicate stoppages in drains, which can seldom be repaired before the season is dryer. A perfect system of surface drains is essential at least where underdrains are not laid, and it is more important to have them clear now than at any other season. If possible get in some new drains where needed; it will make the land 3 to 6 weeks earlier.

Farm Accounts—No work done on the farm pays better, than that done in planning and laying out the farm for the future, and in keeping full accounts.

Fences—Re-set posts and walls heaved by the frost; and mend fences before your neighbors turn out their cattle; but do not think of turning your own stock out to grass for two months yet. Happy is he who has a good fence, but happier he who can do away with one.

Grain—Examine that stored in bins. Keep from dampness, mold, insects, and rats and mice.

Grass Lands—Pull out bushes and briars by the roots, remove stones and roll heaved land as soon as the ground will bear the teams. Top dress before rolling with ashes, Chili saltpeter or guano, where desirable.

Hired Men—Lose no time in hiring *good* men for the Summer's work; the opinion prevails that labor will be scarce and wages high, but we doubt it. Don't have a shiftless, lazy, or unprincipled man on the farm at any price. Where several hands are employed, give each his own work, every team its own driver, and let the most skillful be employed in his appropriate department.

Horses—Groom thoroughly; feed carrots (4 qts. a day) to make them shed their coats well and get them in good condition for Spring work. Be particularly careful to guard against colds taken by exposure, when unblanketed, and against galls and sores.

Ice-Houses should be closed up, the ice well covered with straw, ventilation provided in the top of the house. As poor ice is better than none it may not be too late to secure some, if still needed to fill up.

Manure—Manure-making may now progress rapidly. The compost heaps will need working over, manure for the field carted out, and all kinds of litter and scrapings of yards, ditches, sinks, hen-houses, etc., may be composted with muck or earth. Barn-yard leachings, urine and castor pomace quicken inert compost heaps.

Pasture lands may receive the same treatment as grass lands, in kind if not in degree, and on old pastures bone-dust, superphosphate, or leached, or unleached ashes may be applied with good effect.

Plowing is work never to be done in a hurry or on heavy land when the water is not out of it, and never to be slighted. Manure should never be buried deep at this season, unless the land is to be plowed and manured a second time. Deepening the soil by plowing is best effected in the Autumn, but may be done in the Spring in connection with subsequent surface manuring.

Potatoes—Early planting is advisable, and the last of the month is not too early for some localities. It is much pleasanter to sell potatoes for $1.50 per bushel than 50 cents or less, and this our Eastern farmers may do.

Poultry—Give free range in the orchards and fields, feeding grain with corn and cabbages. They will then not eat buds, but find multitudes of insects. Set hens in places where they may be conveniently taken care of and out of the reach of rats.

Seeds—Secure a supply early, and test samples in pots or boxes of earth before sowing or purchasing largely.

Sheep—A successful shepherd is ever watchful, tender, and careful; follow directions given last month.

Swine—Keep a little charcoal and ashes in a corner of the sty, and a handful of flower of sulphur in the swill is a good thing at this season; feed raw roots to breeding sows but not in quantities enough to produce scouring, and give besides a nutritious diet.

Tools, etc.—We scarcely need repeat the injunction, to look well to tools, harnesses and wheel vehicles of all kinds, and have every thing ready for use.

Orchard and Nursery.

Begin work as soon as the ground is open, protecting trees from freezing after they are removed from the ground. Whoever sets out trees should not bring his trees from the nursery before his ground is ready to receive them, and nurserymen always favor their own interests when they aid their customers, even if it seems to be to their immediate disadvantage. Remove crippled or decayed trees in young orchards. On every farm new places can be found for choice fruit trees. A few dollars in trees will be a paying investment in a brief time.

Apple Trees—Scrape off all moss and bark lice, and wash with lye. Leave pruning of large limbs until Summer, but take off suckers and dead wood. Replace poor sorts by grafting with choice varieties. Graft young stocks near the roots (which may be done in the house).

Cions—Cut early in the month, if not already done. Keep covered in sand until wanted for use.

Draining greatly improves land for fruit growing, and in the nursery this is often the only time to drain conveniently. Use rather large tile.

Evergreen Trees—Leave transplanting until May, except perhaps Norway Spruce, and Arbor Vitæs, which can be removed with balls of earth adhering.

Grafting—Begin with stone fruits before the buds swell but after the sap starts; cut grafts and insert as soon as possible. Leave apples and pears until next month.

Insects—The parent of the canker worm ascends the trunks of trees during warm days this month. Many may be destroyed by surrounding the trunks with paper covered with tar mixed with oil enough to keep it soft, and often renewed. Remove scale from the trunks and main limbs, and look for caterpillar eggs near the ends of twigs.

Manures—Apply lime or ashes worked in, in a circle around the trunk as far as the shade falls at mid-day, also top-dress the soil with compost or dung.

Pear Trees—Let there be plenty of choice standards which are so valuable for both fruit and shade around the dwelling. A few dwarfs may occupy a place in the garden. Procure seedling stocks early.

Pruning—Pear and other fruit trees, except apples, may be pruned this month. Prune apple trees with the *knife only*; prune grape vines now, or wait till May.

Stone Fruits—Cherries, Peaches, Plums, etc. Let the homestead be well supplied; good fruit makes any place attractive and adds value.

Seeds of fruit or forest trees kept over Winter, should be planted as soon as the ground is mellow and warm. Sow evergreen seeds and those of mountain ash on the north side of an open fence or otherwise in half shade.

Transplanting—Preserve the roots uninjured as much as possible; pare smoothly the ends of those broken. Reset them as soon as may be after taking up; straighten out the small roots; set at the depth of natural growth in good mold, above soil enriched with compost of leaves or muck, ashes, and a small part stable manure.

Kitchen and Fruit Garden.

Nothing can be done in the open ground until the soil is dry and mellow. Then get out fine manure and spread and spade it in with a spading fork. Now-a-days nobody should use a spade except for digging poles or such like work. There is a good article on the kitchen garden on the 81st and following pages. As soon as the ground is fairly open, work must commence in earnest. The liability to be obliged to replant seeds killed by cold or wet weather, should discourage no one from committing the seeds early to the soil.

Artichokes—Seldom cultivated in this country. Fork in a dressing of manure, being careful not to injure the crowns. Salt and wood ashes are useful. Make new beds.

Asparagus—As soon as danger from frost is past, fork in the manure spread over it last Fall, and give a liberal dressing of salt. Make new beds, using 1 or 2-year old plants which are much better than old roots.

Cabbage and Cauliflower—Sow early in hot-beds, or boxes. Give constant heat and little air at first, afterwards expose much, to harden for transplanting.

Carrots—Sow in open ground, well manured.

Cold Frames—Prepare the plants for removal by continued exposure as the weather grows warmer, but protect from frost. Cabbage, lettuce, celery, etc., may be sowed in the cold frames to advantage at any time after the weather becomes settled.

Cucumbers—Start on bits of sod as described on page 82, and put a few seeds among the earliest lettuce and radish plants in the hot-bed, so that when they are pulled, cucumbers may have the soil and finally overrun the frame.

Draining will benefit any garden where water will stand in post holes 6 hours after heavy rains.

Fruit Trees—Dwarf pears are the only fruit trees we advise to plant in vegetable gardens. These will grow well but are apt to be troubled by insects, hence prune and wash such thoroughly.

Grapes—Uncover vines when the weather is settled, and there is no danger from frost. Fork manure into borders, the earlier the better after they are dry.

Hot-beds for family gardens are best made from the middle to last of the month. Have a good bottom heat and then give abundant air.

Kohl Rabi—Sow with, and treat like cabbage and cauliflower.

Lettuce—Sow early in hot-beds and cold-frames; thin, or pick out to 4 inches or more apart, according to variety, and stir the soil about them to induce heading.

Manure for the garden should be fine and rich compost. Nothing comes amiss if it be only well rotted. A free use of muck, sods or other vegetable mold is very desirable. Liquid manure, made by using the urine from the cattle stalls or the leachings from the dung heap very much diluted, and judiciously applied at evening, will astonishingly increase the products of a garden.

Onions—Sow black seed early when the ground is warm, not before. Top onions, or potato onions, for early use may be set in hot-beds, cold-frames, or in the open ground—the earlier the better. Black seed sowed in September affords little bulbs for this purpose much cheaper than top onions which are generally used.

Peas—Sow Daniel O'Rourke and Champion of England when the ground is warm, scalding the seed. See pages 81, 75, and 83.

Peppers—Sow in hot-bed where lettuce is pulled.

Radishes—Sow in hot-beds devoted exclusively to them, and keep the tops as cool as possible.

Rhubarb—See article on page 83.

Sea Kale—Force early with hot manure, covering the crowns with pots or boxes.

Seeds—See hints under Farm operations.

Small Fruits—Currants and Gooseberries, prune and set cuttings, if not done in September. Raspberries, do not lift or tie to stakes before settled weather.

Strawberries—Rake off the beds, fork in fine compost with unleached ashes.

Spinach—Uncover protected beds, loosen the soil, water with liquid manure; sow new beds in warm rich soil.

Sweet Potatoes—Lay whole in the hot-bed, barely covered—for sets for planting.

Turnips—Sow a few as directed for radishes, and in the open ground.

Flower Garden and Lawn.

Wait until the ground is settled warm before exposing tender plants, by removing their Winter protection, and before sowing seed. Many of the perennial flowering plants may be divided and reset, by which an earlier and more perfect bloom will be obtained. Among these are the pæony, dicentra, chrysanthemum, sweet william, hollyhock, bee-larkspur, phlox, etc.

Flowering shrubs, especially the early blooming sorts, may also be transplanted as soon as the severity of Winter is past and there is no danger of the ground freezing up again. The disturbance of their rootlets, and the openness of the soil about newly planted trees, or shrubs render them susceptible to injury from hard freezing.

Cuttings of hardy shrubs, etc., such as altheas, spiræas, weigelias, forsythias, lonicerас and the like, may be taken off early in the month before the buds swell. Keep in boxes of earth or sand in the cellar until planting.

Bulb beds which had a coating of manure, leaves, or straw given them for a Winter protection, may be partially or wholly uncovered, toward the latter part of the month; whatever covering they have during March should be light and strawy.

Pruning of roses, and other flowering shrubs, and climbing plants may be done at once. Each plant should be cut back with reference to its flowering habit. By strongly heading back those shrubs which only yield flowers upon the terminal branches or on the old wood, as the magnolia, spiræa, etc., the bloom is nearly destroyed. Roses, especially remontants (or "semi-occasional" bloomers) may be cut back severely, and a finer Autumn bloom is the result.

Box Edgings—May be re-set as soon as the soil is in condition to work. Spread each plant out somewhat fan-shaped, clip off the tops even, and prune the root very close, setting in trench by a line, in sand to secure quick rooting, and pack the earth about the plants with a mallet or pounder.

Grass borders, and turfing generally, may be laid or repaired very early in the season better than later. Let the soil below be mellow, and pack the sods so closely and firmly that there shall be no crevices.

Manure may be purchased at this season rather more favorably, considering every thing, than at any other time. Manure evenly applied upon the land, whether leached or unleached ashes, nitrates, guano, or ammoniacal water, will each and all produce good results, and the present is the best time to manure shrubbery and ornamental trees of all kinds for which coarser manures may be used.

Hot-Beds made for starting cuttings, and for sowing seeds are quite indispensable on a large place. Green cuttings, or those of soft wooded plants, need considerable bottom heat, and to be kept cool at top until they strike root. Avoid excess of moisture, and give good ventilation, gradually hardening them until they are planted out.

Green and Hot-Houses.

The green-houses and conservatories should now be very attractive, although some of the more showy plants will have gone out of bloom. Everything should be kept neat, with no rubbish, plant trimmings, dead leaves, moss covered pots or boxes, left upon the floor or shelves, or dust suffered to collect upon the leaves. The rooms should be aired frequently when the weather is suitable, avoiding a chilling draft directly upon the plants.

Heat must be regulated according to the object in view. If the house is merely a receptacle of plants designed to be kept from the frost, and which are to bloom in the open borders, then a moderate fire heat, with the thermometer from 40° to 45°, is sufficient. With a collection intended for present flowering, or for inducing a rapid growth to use when the out-door planting season arrives, a Summer temperature of 65° to 75° is needed; and for orchids and other tropical plants, as also for propagating purposes, the houses or rooms may have a temperature of 90° in the sunshine, which must be allowed to fall off naturally at night.

Acacias, heaths, azaleas, and epacris, should be shaded from the direct rays of the sun.

Annuals—Sow in pots as occasion offers, for turning out into the borders in May.

Bedding Plants—Push forward those started last month, pinching in and regulating their shape.

Cacti—Water those showing flower.

Camelias—Those which have done flowering, examine for red spider; wash foliage, syringe, and prune.

Carnations—Make cuttings, set out the old plants for layers; never keep plants more than one Winter.

Fuchsias, Chrysanthemums, etc., may be now propagated by cuttings from the new wood. Repot and prune established plants.

Geraniums, pelargoniums, Chinese primroses, cinerarias in or near bloom, keep near the glass, turning frequently.

Insects—Destroy by washing and tobacco fumes.

Pansies are best kept in cold frames, and should be aired and kept back by not admitting the light and heat.

Parlor Plants require even more care than those of the Hot-House. It is an excellent plan to set the pots in larger ones of the same material or of tin, and cover the earth with moss to retain moisture. They will also require frequent turning, especially if growing near the window, to keep them in an erect position. See that the drainage is good and only enough water given to keep the plants in a healthy state; the surface soil may have a dry appearance when there is sufficient moisture at the root. Be sure that there is abundant water always evaporating in the room, or in connection with the fire.

Roses—Established cuttings and plants for early out-door blooming, need re-potting.

Water is required in proportion to the growth of plants. As most plants are now pushing out vigorously, syringe the walls and foliage of plants, and wet the floors to induce a moist atmosphere from evaporation. It will also tend to keep insects in check. The water should not be of a much lower temperature than the atmosphere of the house.

Grapery and Orchard-House.

Cold graperies should be thoroughly whitewashed, mixing flower of sulphur with the wash; the vines may be lifted as the weather moderates, air given on fine days, and the borders watered with liquid manure. Do not tie up to the rafters until all the buds have pushed equally, and keep the house moist when buds are breaking. In more advanced houses, give abundant air, especially where there is bloom; syringe often; thin out superfluous branches.

Orchard Houses—Give trees in pots and tubs liquid manure in moderate quantities, syringe walls and floors often, and give air freely on mild days. Thin out the fruit. Trees rooted in the ground require manuring and watering quite freely.

Apiary in March.

Prepared by M. Quinby—by request.

The bees will begin to fly pretty freely this month, and in many places to collect pollen. In some sections but little is to be obtained until quite late, yet the weather is often warm enough for extensive breeding in good stocks, if pollen is abundant. The utility of flour as a substitute for pollen is pretty well established. It is difficult, sometimes, to get them to take it, especially when offered after a little is obtained from the flowers, but when given early, and a taste for it acquired, they will use large quantities. If it were of no use whatever after being taken into the hive, I still think it would pay, by keeping the bees employed while they might be getting into mischief by quarreling with, or robbing some of the weaker colonies of the yard, and destroying large numbers. To feed the flour, make a floor several feet square, the size proportioned to the number of stocks. Put it in some warm place within a few rods of the apiary. The unbolted wheat flour is best, but not essential, any kind of flour will probably do; buckwheat, I am informed, has been used extensively. If it has been bolted, mix it with saw-dust, chaff, oats, straw finely cut, or any light substance to prevent its adhering too readily to their bodies. Begin by scattering some on the ground or in the grass near the floor; they will usually find it in a few hours. Keep them busy by feeding every fair day. Perhaps a little caution is necessary not to feed too much. Although I have never been able to find any left in the combs at the end of the season, or to discover any bad effect from giving too much, yet I apprehend their combs might be filled with it to the exclusion of brood. It would probably be safe to give what would average two or three pounds to the hive.

If warm weather should make the bees in the house uneasy, the room should be cooled, and the bees quieted, by putting snow or ice on the floor, until a fine day occurs for putting them out. For removing them, choose a clear warm day. When practicable let each hive occupy its old stand. Set out a dozen, and two hours later, as many more. Put the first as far apart as possible, and fill up the vacant stands as others are afterwards brought out; they will mix together less in the confusion of their first issuing, and a less number be lost by entering the wrong hive on returning. Any stock having lost its queen during Winter, will be likely to show it near evening of the first day they fly out freely, by running about in apparent confusion. A queenless colony now should be united with some feeble stock, unless the queenless one is much superior in numbers, and in other respects will make the best stock; in which case, *that* should receive the bees from the other. The combs and honey of a queenless hive, if all right, may be set away for a new swarm, taking care to smoke with brimstone once or twice to destroy the worms as they hatch out. If the colony that contains the queen is the one removed, there will be some brood in the combs necessary to be taken out before putting away. Be careful and not save for a new swarm any combs containing foul brood. Ascertain the strength of each stock by thorough examination some cool morning. Contract the entrance of the weak ones, till only a single bee can pass at once. Watch for robbing bees on the first warm days—it requires close observation to detect it at first. Ascertain which are destitute of stores, and feed as they require it, taking care not to expose any honey where other bees may get to it.

Seeds for Free Distribution to all Subscribers for 1862 (Vol. 21.).

Every subscriber to the Agriculturist for 1862, is invited to select **four or five parcels** *of seeds from the list below.*

These seeds are all valuable. Of the **90** kinds offered, many are *new* varieties, but we include some common useful sorts for convenience of those without access to good seeds.

Most of them are annuals (reproducing seed the first season), and in all cases there will be enough to yield a good supply for future use. Our aim is, to furnish the germs of future abundance in each locality where these seeds go.

Many of these seeds were grown by ourselves, the past year; the others are obtained of the best growers here and in Europe. The distribution is now going on—will close soon

Mode of Distribution.—The seeds may be called for at the office, or be applied for by mail at any time now The postage is only **1 cent per ounce under 1500 miles; and 3 cents per ounce when over 1500 miles.**

Those sending for seeds to be forwarded by mail, will please *carefully* observe the following

DIRECTIONS—(1). Select from the list below, any four or five parcels desired, and write *plainly* on a slip of paper the *numbers* (only) of the kinds of seeds wanted. (These numbers are used on our seed drawers, seed bags, etc.)

(2) Enclose the slip in a prepared envelope—directed in full to your own address, as here shown, and put upon it postage stamps to the amount of **one cent** *for* **each ounce** *of seeds to be enclosed*, if to go **under 1500 miles, or two cents** if to go **over 1500 miles.** (Most places West of the Mississippi river are over 1500 miles.) **N.B.**—The total amount of stamps required can be reckoned from the table of seeds below. Any fraction over even ounces will need an extra 1c. or two 1-cent stamps according to distance. Forward the above prepared envelopes to this office, and the seeds will be enclosed according to the numbers on the enclosed slip. To save letter postage, let there be *no marks on the envelopes* except the address and stamps. About 2 ounces will go in a common sized envelope

Field, and Vegetable Garden Seeds.

No.		Weight of package.
185	Long Bearded Spring Wheat	One ounce.
2	Improved King Philip Corn	One or two ounces.
141	Darling's Early Sweet Corn	About one ounce.
186	Evergreen Sweet Corn	About one ounce.
98	Long Red Mangel Wurzel	About one ounce.
187	Conn. Broad Leaf Tobacco	About one-eighth ounce.
188	Genuine Havana Tobacco	About one-eighth ounce.
189	Spelt or German Wheat	About one ounce.
190	Nepaul Barley	About one ounce.
8	Daniel O'Rourke Pea	About one ounce.
9	Champion of England Pea	About one ounce.
99	Prince Albert Pea	About one ounce.
12	Green Kohl Rabi	About one-fourth ounce.
13	Enfield Market Cabbage	About one-fourth ounce.
145	Flat Dutch (Winter) Cabbage	About one-fourth ounce.
192	Improved Stone-mason Cabbage	one-fourth ounce.
199	Red Dutch Cabbage	About one-fourth ounce.
64	Extra early Round Turnip Radish	one-fourth ounce.
150	Early Paris Cauliflower	About one-eighth ounce.
147	Neapolitan Cabbage Lettuce	About one-fourth ounce.
73	Imported Brussels Sprouts	About one-eighth ounce.
101	Improved Long Orange Carrot	About one-half ounce.
148	Long dark Blood Beet	About one-half ounce.
149	Extra early Bassano Beet	About one-half ounce.
95	Hubbard Squash, pure	About one-fourth ounce.
193	Fejee & Italian Red Tomato	About one-eighth ounce.
154	Ice-cream Water Melon	About one-eighth ounce.
76	Skillman's Netted Muskmelon	About one-eighth ounce.
194	Hollow Crown Parsnip	About one-fourth ounce.
66	Extra Curled Parsley	About one-fourth ounce.
151	Yellow Danvers Onion	About one-fourth ounce.
153	Fine Large Cheese Pumpkin	About one-fourth ounce.
17	Red Strap-Leaf Turnip	About one-fourth ounce.
71	Long White French Turnip	About one-half ounce.
195	Early Short Horn Carrot	About one-fourth ounce.
74	Solid White Celery	About one-fourth ounce.
103	Sage	About one-eighth ounce.
156	Summer Savory	About one-eighth ounce.
157	Long Prickly Cucumber	About one-eighth ounce.
196	Green Curled Kale	About one-fourth ounce.
198	Improved Purple Egg Plant	About one-eighth ounce.
21	Winter Cherry	About one-eighth ounce.
197	Linnæus Rhubarb	About one-half ounce.

Flower and Ornatmenal Seeds.

89	Cotton Plant (2 kinds, mixed)	One-half ounce.
111	Castor Oil Bean	One-half ounce.

On an average any **five** *of the following varieties will go under one* 1-cent stamp, (*or two stamps* if over 1500 miles.)

200	Fancy Gourds, (mixed varieties) (*ha*)*	124	Whitlavia, (*ha*)
		49	Candytuft, (*ha*)
201	Scarlet Chinese Egg Plant, (*ha*)	123	Gilia nivalis, (*ha*)
		182	Sweet Alyssum, (*ha*)
202	Animated Oats, (*ha*)	169	Clarkia pulchella, (*ha*)
177	Graceful Quaking Grass, (*ha*)	175	Mixed Salpiglossis (*ha*)
		168	Swan River Daisy, (*ha*)
23	Mignonette, (*ha*)	56	Mixed Schizanthus, (*ha*)
25	Mix'd Nasturtium, (*ha*)	40	Eschscholtzia Californica, (*ha*)
31	Chinese Pink, (*ha*)		
32	Portulaccas Mix'd, (*ha*)	213	Xeranthemum Annum (*ha*)
51	PhloxDrummondii, (*ha*)		
30	Tassel Flower, (*ha*)	126	Long tubed Centranthus, (*hp*)
37	Beautiful Zinnias, (Mixed) (*ha*)	216	Acroclinium Roseum, (*hha*)
205	Double French Marigold, (*ha*)	214	Balloon Vine, (*hha*)
183	Fine Mixed German Asters, (*ha*)	27	Cockscomb, (*ta*)
		32	Cypress Vine, (*ta*)
206	Golden Straw Flower, (everlasting) (*ha*)	207	Rhodanthe Manglesii, (everlasting) (*ta*)
208	Crimson Globe Amaranth, (everlasting) *ha*	122	Mixed Canterbury Bells, (*hb*)
210	ConvolvulusTricolor,*ha*	125	Standing Cypress, (*tb*)
173	Mixed Larkspur, (*ha*)	42	Foxglove, (*hp*)
167	MalopeGrandiflora,(*ha*)	209	Dw'f BlueLarkspur,(*hp*)
211	Fine Mixed Lupins, (*ha*)	171	Forget-Me-not, (*hhp*)
212	Fine Sweet Peas, (*ha*)		

* (*ha,*) hardy annual; (*hha,*) half hardy annual; (*ta,*) tender annual; (*hhb.,*) half hardy biennial; (*tb,*) tender biennial; (*hp,*) hardy perennial; (*hhp,*) half hardy perennial; (*tp,*) tender perennial.

Containing a great variety of Items, including many good Hints and Suggestions which we give here in small type and condensed form, for want of space elsewhere.

The Boys and Girls will please consider the map on page 89 *all their own*. This map was prepared for page 92, but the advertisers demanded that, and though an unusual number of good items, puzzles, etc., were prepared for page 89, we conclude our young friends will prefer the map in these stirring times. The war will soon be over, and now is a good time to fix the geography of the country indelibly in the mind.

Our "War Map" on page 89 gives the outline of a region likely to continue to be the scene of stirring events during the next few weeks. By the crooked route of the Mississippi river it is 1040 miles from Cairo to New-Orleans, though only about 480 miles in a direct line. The reader will readily find Fort Henry, Florence, etc., on the Tennessee river; Dover, or Fort Donelson, Clarksville, Nashville, etc., on the Cumberland; Pensacola and Fort Pickens on the Gulf of Mexico, etc. This map, with those of sundry sections of the Atlantic Coast in previous numbers, and especially the three large and very full maps in November of Kentucky, Tennessee, Missouri, and Eastern Virginia, afford the reader means of finding most of the localities of interest during the present war. [Those newer subscribers who have not had the November *Agriculturist*, will probably find it worth while to send 10 cents for a post-paid copy.] Our beautiful map of Eastern North Carolina, given last month, came in admirable time to use in connection with the accounts of the Burnside expedition, and many have already said it was worth to them the price of the whole volume.

The Seeds Going.—A busy place is our Seed Department now. The mailing commenced at a rapid rate on Feb. 18. But, with all the force we can put on, it will perhaps take to nearly the end of March to forward the hundreds of thousands of parcels already called for. Subscribers need not consider their seed letters miscarried by mail or lost, if they do not get *all* of those so far applied for, before March 30. Those hereafter called for will perhaps reach them later. We regret that some did not read more carefully the simple rules over the seed list, for then we should not find envelopes with no indication of what is wanted; others with the old style P. O. stamps, which require us to put on new stamps at our own expense; others with the numbers written on the *outside*, involving the labor of preparing new envelopes, and transferring the stamps, a thing of no little difficulty; and others so very small as not to hold half the seeds indicated, which involves a new envelope or the piecing out of the old one; and others with too many stamps, a needless expense to the sender.—But hoping for more care hereafter, we will be as patient as possible. We take real pleasure in sending to our subscribers, at so moderate an expense comparatively for each, these parcels of seed which would have cost them 10 to 50 cents or more, where they could have got them at all otherwise.

Pure Chinese Sugar Cane Seed wanted.—From all accounts, it seems that much of the Sorghum or Chinese Sugar Cane seed in the country has been somewhat deteriorated by hybridizing with other plants of the same genus, such as dourrah corn, broom corn, imphee, etc. We have very frequent inquiries as to where pure seed can be obtained, but cannot answer them. Those who have seed to part with, the purity of which they can establish beyond doubt, should advertise the fact; there will be plenty of purchasers. Deeming the matter one of public interest, we several weeks since wrote to a reliable and competent friend in France, to see what could be done there, and if he could find seed positively good, to secure for us all that he could get, at any cost. He is canvassing the country, but has not yet advised us with what success. We expect to hear soon, and if we get the seed, the fact will be announced in the April *Agriculturist*, in ample season for planting.

Sorghum Manufacturers Wanted.—It is as easy to raise an acre of Sorghum, or Chinese Sugar Cane, as an acre of corn. Both require about the same soil and culture. The main difficulty is, that every man disposed to try a small plot does not want to go to the expense and trouble of procuring grinding mills, boilers, etc., nor would it pay on a small scale. We suggest that it would be well for one or more persons in each locality where this crop is likely to be grown, to make arrangements *now* to procure and set up the apparatus, and make contracts with farmers to take the cane and grind it, and boil the syrup, at a stipulated toll. One establishment will answer for from fifteen to thirty persons who only cultivate one to half a dozen acres. It is better that the business should be conducted by a single individual, than for persons to club together, and all have a hand in it. From what we can gather, we estimate that the manufacturer would make a good profit if he took the canes as brought to the mill, and returned sixty gallons of syrup in the one hundred, to the grower; and at this rate it would be better for the latter than to attempt to manufacture on a small scale.

What Tobacco Seed to Sow.—In New-England, sow the "Connecticut Seed Leaf" variety. The same is best for most sections of New-York, Ohio, and Northern Pennsylvania. In other districts it is best to use the seed of that variety for which there is an established market. Tobacco accommodates itself to the locality very much. Havana seed, in Connecticut, soon changes its character, and the broad leaf variety, called "Connecticut Seed Leaf," was brought originally from Maryland, and was modified by culture on the rich meadows of the Connecticut valley. It retains its changed character to a great extent in Ohio.

Cotton Grown in Pennsylvania.—Ezra Michener, M. D., Chester Co., Pa., sends for the *Agriculturist Exhibition Tables* a fair sample of unbleached muslin, of which 17 yards were made in that county from cotton grown there by himself. He writes: "In 1826 I obtained seed from a cotton manufacturer, and planted it the same as corn, without manure or extra tillage. It grew well, and the first bolls opened about the middle of ninth month, (Sept.) The cotton was gathered as fast as they opened. Early in tenth month the plants were killed by frost, but many of the maturer plants continued to yield a staple little inferior to the first gathered. ....The fiber was cleaned with a simple home-made machine, consisting of two rollers, one of them turned with a crank, which easily and rapidly pulled off the fiber from the seed....The following season was unfavorable, and no matured cotton was obtained...."

Northern Cotton—Transplanting. The recommendation to sow cotton in a hot-bed and transplant like tobacco or lettuce, must be followed with caution. The cotton plant is *exceedingly* impatient of removal, and must be moved *so as not to know it*. Hence, sow on bits of sod 4 inches square, or in 3 inch pots of good soil, leave in the hot-bed, and transplant to the open ground when danger from frost is past, taking great care not to break the soil or balls of earth turned out of the pots.

To Officers of Agricultural Societies.—We have received several letters, saying that circulars have been sent out to Agricultural Societies, offering 20 copies of a so-called Agricultural paper, without charge, if the prospectus of the paper be printed on the covers of the premium lists; it is asked if the publisher of the *Agriculturist* will do the same. We answer, No; for two reasons: 1st, we trust it is not necessary to give away copies of this journal for the sake of securing the *quasi* indorsement of its being placed in premium lists. 2d. We can not afford it. The *Agriculturist* is wholly a self-supporting institution, and each copy must pay its own way. If we were engaged in other business, and had artificial manures or implements to sell, we might give away hundreds of copies, providing the giving a man a dollar paper put it in our power to induce him to buy artificial manures or implements that would yield us a profit of five to twenty dollars, or more. It would be a good speculation.—However, a good, reliable Agricultural paper is the best premium a Society can give—it is a living, oft-repeated premium, one that stimulates to improvement, and directly benefits a Society To Premium Committees who think the *Agriculturist* worthy a place in their lists, we will supply the paper as low as we can consistently with our obligations to full paying subscribers. Large numbers of copies are now sent in this way, and have been for years past.

A Bureau of Agriculture.—Congress has at last so far recognized the great Agricultural interest of the country, as to detach it from its long time position of an appendage to the Patent Office, and provided an independent Bureau of Agriculture, having an officer at its head with a salary of $3,000 a year. So far, so good. But if the new Department is to be an improvement upon the old nuisance, it should be placed under the direction of an intelligent, capable, honest man, with special talents and qualifications for the post; one who can take in a broad view of the general agricultural and horticultural interests of the whole country. He must have higher aims than the annual issue of a recipe book got up for Congressmen to send as a tickler to their country constituents. Let us have then, no quack whose chief recommendation is the number of times he has got his name into the papers as a patron of Agricultural shows; nor some self-dubbed "Professor of Scientific Agriculture:;' nor an impractical theorist; nor an opinionated "old fogy;" nor one who is not honest enough in providing seeds or plants for distribution to look to the object to be attained, more than to the amount of private per centage that the dealer in old stock will allow him. We will hope for better things now.

"Thorley's Cattle Food."—This so-called food for animals has been as widely puffed and as largely sold in England, as some of the Sarsaparilla syrups (molasses and water) in this country. An agency was established here some time ago and the City and surrounding country literally plastered with flaming showbills. Supposing it to be in the Patent medicine line, we even refused to advertise it. The effects upon animals *claimed* for it, (sleekness of hair and plumpness of carcass,) indicated arsenic or antimony. We privately procured some and had it tested at the Yale College Laboratory, but neither of these substances were found. We therefore waited for the practical test, which has now come in authentic form. Dr. J. B. Lawes, of Rothamstead, procured 8 pigs every way alike, divided them into two lots of four each, giving both lots all the barley meal they would eat, but fed one lot the prescribed amount of Thorley's Condiment, which Mr. Thorley claimed would "fatten the pig in half the time," and make pork worth "4 cents a pound the most." The result of the careful trials, in which everything was weighed, showed a difference of over $12 *against* the use of the Condiment, in feeding 4 pigs 10 weeks. The details of the experiments are interesting, but too long for insertion here.

Elder Sap-Spouts.—Some subscriber, whose name and address we have mislaid, recently sent a sketch of his mode of making sap-spouts, or "spiles." He cuts the common elder stalks into convenient lengths, then saws half through on alternate sides, at *a* and *b*, and with a chisel splits the piece in two. The pith is pushed out and the ends beveled for entering the auger holes in the trees, as described last month. Such spouts are very rapidly made wherever good elder stalks are to be found.

A Family "Mangle" Wanted.—Now that we can *wring* clothes with a first-rate machine, it is well suggested by a lady reader of the *Agriculturist*, that there is a fortune, and the blessings of all good housewives, in store for the Yankee who shall get up a good, practical family mangle, or ironing machine. She has seen such implements in private families in Europe, that are far better than nothing, but thinks the Yankees can get up a superior one. We heartily second the suggestion.

Onion Culture—New Edition.—The large demand for this valuable Pamphlet (giving the experience of 17 practical Onion Growers,) has rendered a 3d edition necessary—now ready. (Price post-paid, 21 cts.)

Flora Temple.—This famous trotter has been withdrawn from participating in the sports of the course, for the purpose, it is said, of perpetuating her rare qualities in her offspring. It will be hard to keep the "Queen of the trotting Course" away from the scene of so many victories.

Diamonds for Dressing Millstones.—A paragraph on this topic last month closed with a query. Since then a card has come in for our advertising columns indicating that the diamonds were for sale near at hand. Before receiving the advertisement we dropped in to see if the thing were a reality. After looking into the matter a little we begin to think that the thing is not so impracticable after all. Mr. Dickinson's apparatus does seem to do the dressing easily and quickly and that too with a diamond weighing only one-fourth of a caret. The common glaziers' diamonds weigh about one thirtieth of a caret. We should judge the subject worthy the investigation of millers. Mr. D. has left with us one of the diamonds and his new guide, which we shall hand over to a friend, who is a miller, to test.

Starting Delaware Cuttings by Grafting.—Chas. B. Ott, of Bucks Co., Pa., grafted Delaware upon the common frost grape last April, in the following manner: The wild vine was put down as a layer, split through with a knife along the whole length, at intervals of one foot each, and the Delaware clons of two eyes each were shaved down and set in the slits, and the earth filled in around them to the upper eye. About three fourths of them lived, and some made a growth of 15 feet. The wild vine was about one inch in diameter, and the top end was left out of ground to keep it alive

Liquid Medicine Dangerous for Horses.—It is difficult to induce a horse to take fluid medicine, and he is very likely to get it into his lungs and thus produce spasmodic coughing and sometimes, permanent disease, or "broken wind." According to experiments instituted in Hanover (Germany), horses have even been killed in this way. Use medicines in the form of powders, agreeable drinks, or mashes, pills, etc.

Galls on Horses Cured.—E. R. Churchill, Hillsboro' Co., N. H., writes to the *Agriculturist:* "Is it generally known that arnica flowers digested in spirit cures galls on horses very quickly, applied several times a day? It cured a very obstinate case on my own horse last Summer." (The dried flowers are sold at drug stores.)

Bloody Milk.—L. N. P., Ottawa City, Iowa. Garget is probably the cause. Feed a teaspoonful of saltpetre twice daily, and if the bag is caked and sore, rub it with equal parts of arnica tincture and warm water which will take the soreness out, and then rub and *knead* it.

Soiling Stock.—A "Subscriber" at Jennerville, Chester Co., Pa., wishes to see in the *Agriculturist* the Dr. and Cr. side of some well conducted soiling experiments, extending through a considerable period. He wishes to know how it affects the health of stock, about the gain in the manure heap, and whether it will pay. There are readers of the *Agriculturist* who are experienced in this—will they respond with the particulars?

The Monster Hog.—We published in the February *Agriculturist* the statement given us by the butchers of the weight, etc., of an immense hog. From the gentleman upon whose farm it was fattened.—Mr. Frank Lathrop, of Morris Co., N. J.— we learn that when 2 yrs. 8 mos. old, five months before he was killed, he weighed 1,035 lbs.; that he was imported by David Leavitt, jr., Esq., of Great Barrington, Mass., with the following pedigree: "Bred by Earl of Sefton, Croxteth Hall, Lancashire, England. Pigged Dec. 1, 1858, got by Young Tinker out of Maria; Young Tinker by old Tinker; he by Bruiser; he by Burster, and he by the Berkshire Boar, who weighed 1,175 lbs., when 2 years and 3 months old, and was supposed to be the weightiest pig of his age England has produced. Maria is out of Sal; Sal, by Mot; Mot, a lineal descendant of the Suffolk Punchster, the greatest pig of his age." (Signed). WM. LITTLE, JR.
Farm Steward of the Earl of Sefton.

His weight was stated by Lilly & Brower, who butchered him, to be 1,393 lbs. alive, and 1,053 dressed.

The French Cure for Sheep Rot.—We do not remember to have mentioned that in France during the past year a medicine has come into pretty extensive sale for the rot, a disease which prevails much more generally in Europe than in this country. So great were the claims for this remedy, that the Royal Agricultural Society of England deemed it worth while to appropriate £12 ($60), for the expense of a trial of it in England. Prof. Simonds was entrusted with the experiments, and after a faithful trial during last Summer, he reports that no good results were apparent. It is therefore to be classed with the thousand and one humbug nostrums, cures for consumption, etc., that get notoriety by advertising, deceptive certificates, etc.

Sheep Wanted at the West.—In a letter of Feb. 5th, from F. W. Windship, of Princeton, Bureau Co., Ill., he remarks incidentally: "We want five to ten thousand sheep in this County immediately. Where can we get them, and at what price? If any one can tell, let him address the Secretary of our County Agricultural Society, or myself." (Mr. W. is County Surveyor.)—Similar inquiries come from other points at the West, as well as from some localities in the East. We do not know how the want will be supplied. Farmers are becoming more alive to the profitableness of sheep raising, and probably very few would now be willing to part with their flocks at prices they would be likely to be offered for them. We suggest in this connection, the importance of taking good care of the breeding ewes at this season. Keep them in good heart, not too fat, and let the greatest care be exercised to save and raise all the lambs dropped this Spring.

Sheep—Relative value of Breeds in England.—In the prize sheet for the next Show of the Royal Agricultural Society, prizes of $100 (£20) are offered for the best shearling ram, for the best ram of any age, and for the best pen of five shearling ewes. These are for Leicesters, and Southdowns. Only $75 (£15) are offered for the same classes of Lincolns, Cotswolds, and Kentish or Romney Marsh breeds. Quite a little breeze is being raised by the graziers of the last named three breeds, for, as says one of the number, "this course of the Society is to inform foreigners who come to the Show to buy sheep, that the Cotswold, Lincoln and Kentish are only *second* class sheep, whereas, we (the graziers) think them the most *useful* and profitable class of sheep in the Kingdom ..." A strong appeal is made to the breeders to vote out of office the members of the Council who have made the distinction.

How to Prove the Vitality of Eggs.—De Berri, Rye, N. Y., writes to the *American Agriculturist:* It is emphatically "Love's labor lost" to set her on eggs lacking vitality. For some years I have generally been successful in "counting my chickens before they were hatched." About the 2nd week in March I select *fresh* eggs of a *medium* size, and set as many hens as possible at the same time. After three days examine the eggs at night with a light, those having the embryo chick will appear dark, while those lacking vitality will look clear as ever, remove them as they will not hatch, but are still fit for family use; transfer the good eggs from one nest to another to make up deficiencies, and give the robbed hens fresh eggs.

Yellow Butter in Winter.—R. Downs, New-Haven Co., Conn., puts the cream into the churn, stirs it for a few minutes, and then adds the juice of a good sized yellow carrot. The carrot is grated or scraped fine and mixed with a pint of new milk, and left to soak for a short time, then strained through a very fine sieve or cloth and the liquid added to the cream in the churn. The butter will be as yellow as if made in Summer, with no carrot taste.

"Milk for Babes."—D. J. F., of Troy, writes to the *Agriculturist* dissenting from a view expressed by a writer in this journal, and giving his own practice. He says, "I have had 18 years experience in furnishing the unmixed milk from a single cow to infants, sometimes to as many as 7 at once, and have never found a *farrow cow's* milk that a child would thrive on. There are but few new milch cows whose milk is good for infants. When I commence leaving milk for a young child, I always inquire after its health for a week at least, if the milk makes it sick, I change to another cow, and continue to do so until I find milk that is good for the child, then I do not change till the child is weaned, if the cow remains well. Not one milkman in ten is honest in carrying one cow's milk. They find it very convenient to supply the baby's milk out of a 60 quart can.

Concentrated Milk.—Cynthia M. Green, Broome Co., N. Y. No patented process is secret—the Government grants exclusive rights for a term of years, in consideration of the full disclosure, or making *patent*, of the process or method. This milk is concentrated by an expensive process, which is, we believe, patented. The milk is purified, and very rapidly boiled down by means of steam heat and an air-pump at a temperature considerably below that of boiling water, (about 160°,) until 5 gallons are reduced to 1, in which condition it is marketed, and when used it is reduced by the addition of five times as much water and a little salt, which it seems to need, in order to restore the flavor of *fresh* milk.

Lime on a "Truck" Patch.—M. B., of Clinton Co., Pa., asks if it will do to put fresh lime on a "truck" patch. If the soil is rather heavy and has been long receiving its annual supply of manure, or contains much vegetable matter, lime will probably be an excellent application. Apply about a peck to the square rod, sowing on the surface, and working it in. Lime is said to make peas boil hard. By no means mix it with manure, for its action will set ammonia free.

Salt as Manure.—G. B. Smith, Albany Co., N. Y. Salt is an excellent ingredient in composts, added at the rate of about a peck to the load. It is a good dressing for grass, grain land, and ground where roots are to be grown, and in fact it is seldom without some benefit; yet it is impossible to tell how much or how little will produce the best effect. Sometimes two or three bushels to the acre seems to produce the best results, and sometimes but little effect will be seen from a dozen. You will find an answer to the question about gas lime in the January *Agriculturist*, page 7.

Manure under Shed.—L. Labo, of Pennsylvania, and others. Manure mixed largely with straw and thrown together under cover, without further care, will be in danger of drying out and fire fanging. It should be occasionally forked over, and if not wet enough to continue rotting, water should be thrown on to keep the entire heap always moist. A free addition of muck, or black earth, or sods, or even of common soil, will help to absorb the escaping gasses, and increase the value of the heap materially, unless there be as much straw as can be decomposed by the intermixed droppings of animals. Muck, or black earth, or sods, when composted (mixed) with decaying manure, increase the value of the heap not only by acting as absorbents, but they also add much fertilizing material by the decomposition of their own organic elements.

Hen Manure.—Rygate, Vt. You did not calculate for the strength of the compost made by "drying" hen manure with unleached ashes. Never make such a mixture; ammonia is set free and lost. In this case it was disengaged in the soil and in contact with the seed, and of course killed it. Compost hen manure with soil or muck, throwing it into a heap and working it over two or three times, adding more soil each time, until it is about ⅓ manure, ⅔ soil or muck, and put of this but a handful to the hill of corn. The grass you sent was a variety of *Panicum dichotomum*, one of the "Panic" grasses.

Granite Manure.—"John." Yes, there is such a thing; but it will never drive barn-manure out of use. The *fine* chips or dust of granite quarries, and of the stone-cutters, when strewn over grass-land often produces a marked effect. Granite is composed of felspar, mica, and quartz; and felspar contains about 14 per cent of *potash*. Hence the fertilizing power of the granite.

Muck Swamps which can not be Drained.—M. D. Loper, Long Island. In the Winter cut off all the brush, and in a dry time dig out a place in the lowest part, as deep as you can, for a constant pond, and dig ditches running into it. In this way you will undoubtedly get a good part of your swamp dry enough to dig muck in, even in Winter. If there is a clay bottom to the swamp, and gravel or sand beneath, a boring or well through the clay will tap such a sink, and give drainage.

Grass Land—When to Manure.—Hampden, of Holyoke, Mass., communicates to the *Agriculturist* his experience in manuring grass lands, which we have only room for in a very condensed form: Three years ago, he top-dressed part of a meadow in August; 3 weeks, dry and hot, without rain, followed; he thought all the manure lost. After a few rains, the manured part showed finely and the next Summer the crop of hay was double. The next year, top-dressed a meadow the last of November; saw very little benefit the next season, and this little, perhaps, due to the action of the manure as a mulch or "blanket" rather than as a fertilizer. Last year, manured part of mowing lot in August, the rest in September. The appearances indicate one third larger crop from the August application.

Wire Fence on a Stone Wall.—J. C. Boorse, Montgomery Co., Pa. The manufactured wire netting fence answers a good purpose, fastened to posts set in the ground or in the center of a low stone wall It can be purchased at most agricultural stores for $1 to $2 per rod, according to the hight, the size of the wire, and the fineness or coarseness of the meshes.

How Much Fall in Drains?—T. Hooper, Kansas. Be sure only that there is a fall. If you are *sure* that a tile drain *falls* 1 inch in 100 feet, and that uniformly, it will do, but it is easier to be sure of 1 foot fall in 100 feet, and 3 to 5 feet are preferable. Stone drains, etc., need a greater fall than tiles, but drains with little fall must be very carefully laid so as not to get out of place or fill up with sand and silt.

Cisterns.—J. M. H., Mt. Vernon, N. Y. You may locate the cistern at almost any distance from the pump by having a tight connecting pipe. The force required depends mainly upon the hight of the pump above the water, though the longer pipe involves more friction from the water. The expense of blasting will probably greatly exceed that of a connecting pipe—you can judge. Roman cement is an English article, so called from its resemblance to the cement found in the old Roman structures of England. Probably none in the world surpasses the Rosendale and Kingston cements. The Croton Acqueduct was laid in these. We can not say which is the best pump.

A Good Cellar.—A. M. Ward, Hartford Co., Conn., thus expresses to the *Agriculturist* his appreciation of a good cellar. "Although living in a hired house, four years ago I had the cellar bottom cemented at my own expense. The walls were rough, destroyed costly brushes in whitewashing, and let in damp, sometimes water, and more especially *rats*, so I kept a tub of mortar on hand in the cellar, with which occasionally of an evening I smoothed off the walls; and then whitewashed. Now it is a pleasant room, with constantly increasing *conveniences*, and is the envy of my *wealthy* neighbors who have nothing in comparison."

Sulphur to Prevent Potato Rot.—It is announced in Austria that carefully conducted experiments prove that sulphur put in the drills with potatoes when planted, has prevented the rot to some extent, and besides, improved the flavor.

Weeds a Remedy for Potato Rot.—A Delaware Farmer says he plants his potatoes as soon as the frost will permit, in Spring, tends them well until they bloom, but never disturbs them after that. Where the crab grass and other weeds cover the ground most effectually there are the fewest rotten potatoes, or rather no rotten ones. The yield is not always as good, but he finds his gain in this practice. He has always found the most rot on naked, dry spots, exposed to the sun. [Weeds or rot—the choice is a hard one.—ED.]

Potatoes—How an Extra crop was Raised.—Turnips.—J. B. F., of Hunterdon Co., N. J., writes to the *Agriculturist* that he had an extra crop of potatoes last year, thus: "Manure was plowed under; the ground then harrowed and struck out with furrows 2½ feet apart. The potatoes were cut 3 eyes to the piece, and the pieces placed 1 foot apart in the drill; ashes were sprinkled on and then a covering of 4 inches of soil. When well up, the plow was run close to the row to throw the dirt away, and then it was thrown back again by running the plow the other way. This loosened the soil and admitted air and warmth. A week after, the cultivator was run between the rows. Just before blossoming the double plowing was repeated. The planting was about April 15; the varieties, Mercers and Buckeyes, which mature before the rot takes place. At the last hoeing turnips were sown between the rows. I have also raised good crops of turnips sown among corn at the last hoeing—the flat and red top varieties grown thus often reaching 4 lbs. weight, and these stored in the cellar with a little dirt over them keep well for cattle until Spring." [Like almost all records of experience sent to us, the above is defective in one or more items; nothing is said of the kind of soil, nor of the kind or quality or amount of manure applied. All such particulars are essential to render one man's experience fully useful to another.—ED.]

Planting Potatoes.—Experiments by S. S. Gregory, Cuyahoga Co., O., reported to the *Agriculturist* indicate that when the seed is cut it will pay well to plant all the pieces flesh-side down. In his experiments a difference of nearly one fifth was obtained.

Keeping Celery in Winter.—J. M., of Lancaster Co., Pa., communicates the following experiment to the *American Agriculturist*: I carefully lifted my celery with as much earth as would adhere to the roots, and set the plants close together in the milk trough in my spring-house, and at once put in and have maintained about 6 inches water in the trough. The celery shows as much vigor of growth now (Jan. 15,) as before transplanting, being much larger now, than when it was dug up, bleached nicely, and the new growth is very fine and crisp, and of course is very conveniently obtained for use. The spring house is built of stone and arched over with brick [and is doubtless dark.]

Heading Cauliflower in the Cellar.—"A Constant Reader," Albany, N. Y., writes to the *Agriculturist* that on the approach of the present Winter he found some thirty cauliflowers that had not matured. These he transplanted into soil in the cellar, putting them near together, with earth around the roots. They were watered occasionally, and every plant matured, producing as fine and large heads as he ever saw. [Not unusual.]

Prolific Pumpkin Vine.—H. A. Terry, of Pottawatomie Co., Iowa, says he raised **42** cheese pumpkins upon a single vine from seed distributed last year by the *Agriculturist*. They averaged 18 lbs. each, making 756 lbs. from the single vine. The main vine and laterals measured 376 feet in length. We call that more than "some pumpkins." The soil must have been very rich naturally, if not artificially.

Transplanting and Pinching Tomatoes.—"Gardener," Lewiston, Me.—Do not shorten the tap root of tomatoes, but pinch back early plants when one foot high, just nipping off the top shoot. Cover early plants during cool nights with flower pots to force them.

Hemlock Hedge.—"O. S." The best way is to get your bushes from a nursery—they will be better plants, and be more likely to live. But if not convenient to do that, then try this method: Having prepared the ground well all along the line of the proposed hedge, when the hemlocks begin to show little green tufts of new leaves on the tips of the boughs, go to the fields, (not to the dark woods,) taking along a sharp spade and some matting to cover the roots. Select small, bushy plants, not more than two feet high, cut a circle around each tree, eighteen inches or more from the stem, and lift the plant, soil and all, into the wagon, covering the exposed roots at once. When the wagon is full, lose no time in getting home and setting out the trees. Mulch them well, and the most, if not all of them will live and prosper.

Evergreens for Cemetery Lots.—G. R. N., Tolland Co., Conn. You will find nothing to answer your purpose better than Arbor vitæ, it will bear trimming to almost any degree or form. Box, though hardy, needs to be protected, or the leaves will turn yellow, and parts of the shrub will become naked or dead.

Peach Trees Laid Down in Winter.—E. R. C., asks: "Can peach trees in the open ground be so dwarfed as to be laid down and covered in Winter?" It may be done, we suppose. The best way is probably to form five straight branches taken as near the ground as possible, and keep them closely pruned and tied down to stakes, so that the outer ends will rise but two or three feet above the ground according to the length. Mr. Camp, of Pennsylvania, has 30 trees laid down this Winter; we have asked for his results after the next fruiting.

Sowing Apple Seeds.—J. H. C., Toledo, directs, in a communication to the *American Agriculturist*, to use seeds washed from unfermented cider pomace. Good seed is bright and plump. Sow in Spring or Fall, half an inch to an inch apart in rows an inch deep, and three and a half feet apart, in good warm land. If sown in Spring they should be mixed with sand and exposed on boards or in boxes to freezing. Keep the land clear of weeds and "cultivate" three or four times in a season. About one third of the plants will be ready to graft at one year old if they do well, and the balance at two years old.

To Propagate the Mulberry.—W. M. S. The Morus multicaulis, and other varieties of the mulberry are propagated by layers and cuttings of single eyes or buds. They root readily in a moderate hot-bed.

Fruit Trees by the Roadsides.—Zschokke somewhere puts words like these, in the mouth of an old mechanic, addressing his son who is on the point of leaving home, in search of work as a journeyman: "If you come into a country where fruit trees are planted along the highways, there *rest*, my son. You are in a country where honest and sensible people live."

Pears—Varieties on a Tree, etc.—Edwin Blosser, Middletown, Conn. There are no objections to grafting several sorts upon one tree, except that a tree thus bearing several kinds rarely or never exhibits beauty of form; it grows one-sided or otherwise out of shape unless great care is taken to graft one kind on the lower limbs and another in the top—always having in view the size of the pears, the habit of growth, and the tendency of the fruit to fall. Mixing varieties may also make confusion in gathering the fruit.

Good Early Pears.—"J. K."—Madeleine, ripens early in August; Bloodgood, in August; Osband's Summer, do; Dearborn's Seedling, do; Doyenne d'Ete, do; Rostiezer, early September; Tyson, September.

Barren Lemon Trees.—Mrs. Allen, Chautauqua Co., N. Y. Try the effect of getting a few cions or buds of a bearing tree, from some one growing them in a green-house, and bud or graft the barren tree. Budding in June will probably be preferable.

The Austin Strawberry.—An Indiana subscriber sends an advertisement of this berry clipped from the Country Gentleman, and asks if the claims put forth are reliable. They are rather strong. The Austin Strawberry is large, and pretty productive, but not of the best flavor we think. Its greatest merit is that it fruits later than most other varieties, and therefore prolongs the season of this delicious crop. It answers very well, therefore, as one of an assortment in the garden.

Strawberries, Beans.—R. F. C., Mich. The Black Prince strawberry does only tolerably in this country; other varieties surpass it as bearers. The beans taken from the crop of a wild goose are the prairie bean *Phaseolus diversifolius*, common in Canada and the Northwest.

The Green Rose.—"D. S." Not of French origin, as you suppose. Monsieur deserves the credit of originating most of our best roses, but he must not bear off *this* glory. A florist in Baltimore, (his name we do not recall,) first introduced it to the world, about eighteen years ago. An enterprising Philadelphia gardener soon sent it over to England and France, where it produced quite a sensation. The price, at first, was $2 50 a plant. Now, it is as cheap as other good roses. But we advise no one to buy it for its beauty. The flower is only semi-double, and the petals of a dirty pale-green. It is interesting only as a curiosity.

Ten Fine June Roses.—"Alice." You will find the following excellent, though they do not by any means include *all* the first-rate Summer roses: *Aurette*, blackish purple, medium size, globular and double. *Cericette*, bright red, double. *George 4th*, large, purplish crimson, double, but loose, very fine. *Harrison's Yellow*, not fully double, but early and pretty. *Persian Yellow*, fine, golden yellow, double. *Old Cabbage*, needs no description or praise. *Luxembourgh Moss*, bright red and mossy. *Madonna Hardy*, white, nearly double. *Venus*, white, with a delicate pink tinge, double. *La Tourtenelle*, the "dove-colored" rose.

Skeletonizing Plants.—The simplest method is to select firm, perfect leaves of any kind, such as camellia, apple, pear, magnolia, ivy, jessamine; steep the firmer varieties in hot water a few minutes, (this is not necessary with others) and then lay them in cold rain water, and keep them covered by it, for two or three weeks or even more, not changing the water. After this take them out one at a time, and laying them on a plate with a little water, by means of a camels' hair pencil remove the softened pulpy part of the leaf, when nothing but the fibers will be left. These should be perfectly freed from pulp even if another week's soaking be required. Finally, bleach by laying the leaves in a liquid made by putting one tablespoonful of chloride of lime in a quart bottle of water, shake it well, and after it has stood some hours pour off the clear liquid for use.

Non Flowering Wistaria.—Sarah Eldridge, Litchfield Co., Conn. If your Wistaria Sinensis is in an exposed situation, or where the sun starts the buds too early in Spring, lay it down in the Fall, and put it up late in Spring. Dig in a compost about the roots, and if the vine is old and feeble, cut back and train a new shoot.

A Curious Hanging Basket.—Miss E. Slocum, of Fayette Co., Pa., sends the following description to the *American Agriculturist*. Procure a large sized turnip, and scrape out the underside, leaving a pretty thick wall all around; fill the cavity with earth, and plant in it some climbing vine—cypress vine, or morning glory. Suspend the turnip with cords, and in a little time the vines will twine aroung the strings, and the turnips sprouting from below, will put forth leaves and stems that will turn upward, and curl gracefully around the base.

Sewing Machines.—Mrs. O. G. N., Dane Co., Wis., inquires about the truth of the statement that in many families sewing machines are laid aside as soon as the novelty wears off, and the needle resorted to. Should we open our columns to testimony of the constant and increasing use of these machines in families where they have been long used, there would be room for nothing else. In our own family we have had them in use for four years and prize them now more than ever. If a woman has no tact or accuracy, or ability to understand simple mechanical contrivances and effects, and is withal disinclined to work of any kind, she will probably neglect her sewing machine after the novelty is worn off.

Milk for Bees.—In some of the Germany journals we see it stated that German Bee-keepers have found sweet fresh milk the best artificial food for bees. This is a new idea to us—not very plausible—and we leave experienced apiarians to condemn or approve.—ED.

Tunneling for a Water Course.—John R. Thompson, Pendleton Co., Ky., asks the cost of making a small tunnel through a limestone rock, 250 yards. He has a stream, with a fifty-foot fall in that case, available to run a mill above the banks of the Licking River. It is to be noted that no man has a right to tap a stream which flows through other men's lands and not return the water to the same stream again. The tunneling will cost under the most favorable circumstances scarcely less than $3 a foot and may cost $10. If the rock be soft and easily worked with the pick and bar, the expense will be least; he may have to use powder for every foot he advances. The tunnel ought to be commenced at each end in order to have good air; a hole 2½ or 3 feet wide, by 5 feet high would be as small as a man could work well. Picks, shovels, sledges, sets of drill borers, iron wedges, crow-bars, and barrows are the

tools needed. The tunnel should be nearly level, to avoid the water wearing, and to have as much fall as possible at the mill. Should the rock be full of cracks and fissures, or should loose ground be encountered it would be necessary to support the sides and top with timber and planks, and the same causes might make it necessary to lay the water course in cement.

Dynamometers.—P. H. Lucas, Crawford Co., Pa. This implement is not usually kept at agricultural implement stores, but is made to order when wanted. The common form was that of a C-shaped spring which the draft opens, and to which a dial and index are attached. The scale was graduated by suspending a platform to the dynamometer and loading it with known weights. Recently elliptic springs have been employed, and are preferred, we believe.

Barometers.—John P. Kast. Hang your Kendall's Aneroid in any convenient room. It will indicate the same in-doors or out, warm or cold, a change of 30 or 40° of temperature will make scarcely any perceptable difference with it, except for the most scientific observation. Bear in mind that the barometer does not indicate changes of temperature, but gives accurately the *weight* of the air, and from this and from other things, if we know enough, we predict changes.

Best Soil for Plants in Pots.—E. L. Bartholomew, Westfield. We can hardly give a set of arbitrary rules. The best growers make up a general mass and use it for nearly all kinds of plants (excepting heath's and orchids), adding more sand for small rooted plants such as azaleas, lechenaultias, roses, etc.; and less for the strong-rooted, such as acacias, oleanders, etc. The basis of a general soil is grass sods from old pastures in good condition. These are gathered and piled up with one fourth their bulk of manure—more or less according to their richness—and left a few weeks until they decay so as to crumble easily in the hand. Chopping finely with a spade hastens the decomposition. If leaf-mold (that is black soil of decayed leaves) or peat be at hand they can be mixed with the decayed sods freely. If the sod soil was clayey or compact considerable fine sand should be added to make the whole light and friable. Such a preparation may be made up in large quantity and be kept on hand, always ready for use in pots, and also for covering small seeds sown in drills in the open ground.

Use Earthen Pots for Plants.—Very few yet appreciate the convenience of a few earthen pots of different sizes for starting early plants. They cost but little, and with moderate care will last for years. A few will suffice for the ordinary garden of the farm or village plot. Filled with soil and sown in March with seeds of cabbage, tomatoes, cauliflower, peppers, cucumbers, lettuce, etc., and with various flower seeds if desired, they can be left out on the South or East side of a building except when the air is below the freezing point, in which case they can be temporarily carried into a cellar or warm room. By the time the ground is ready for seed, the pots will afford a supply of good sized plants to set out, and from two to four weeks, or more, will be gained. If the seed be sown in very small pots, or the plants be transplanted into these, a ball of earth can be turned out into the open ground, and the plants receive no check.

The Best Pots for Plants are those made of clear clay. Much sand in the clay glazes them. Small stones or pebbles will crack out on wetting. It is more important to have the inside smooth, than the outside, so that the root fibers will not attach themselves, and thus prevent the easy removal of the ball of earth in a mass. For a similar reason the bottom should be considerably narrower than the top, and the sides slope uniformly. With pots thus made one can, after a little practice, take out and examine the ball as often as he desires, and yet not disturb the growth. The rim of the top should not project far, or the pots occupy too much space. The hole at the bottom should be well protected with broken crocks, oyster shells, coal cinders, or stone chips, covered with moss, so as to preserve good drainage. These pots are of all sizes, from "thumb pots" holding half a gill up to several gallons. The thumb pots suffice for *starting* single plants—and cost scarcely a dollar a hundred.

Chicory.—C. H. S.. Clay Co., Ill., asks, "How shall I cultivate chicory for use, instead of coffee?" Sow early in April, in good warm soil, in rows 16 inches apart. Keep the ground loose and weeded, and thin to 4 to 6 inches apart. The culture is similar to carrots or parsneps. Dig when the plants stop growing.

Gooseberry and Currant Wines.—Dr. A. Noyes, of Bangor, Me., sends us half a dozen bottles of wine, made from gooseberries and currants in 1859. To each quart of juice were added 2 quarts of water and 3 pounds of sugar. The mixture was then put into casks, filling them up. The bung-holes were left open until fermentation had nearly ceased, and then closed, not perfectly tight. The samples received were: 2 from red currants, 2 from white currants, and 2 from gooseberries. All are good; those from gooseberries very agreeable; but all rather spiritous, from the amount of sugar used.

Sassafras Bark a Remedy for Worms in Dried Fruit.—Dried apples, peaches, and other fruit are usually infested with worms, if kept for a long time. S. S. R., sends the *Agriculturist* his plan of keeping them. "Put in common muslin bags with a little sassafras bark scattered through, a handful of bark to a bushel of fruit, and no worms will trouble them, as I have proved by keeping dried apples 2 years in a pantry."

Soiling Sheep.—A., Millnersville, O., inquires if sheep will do well if kept up and fed green hay in the Summer time, instead of being kept at pasture. When sheep are "kept up" in the Summer time, they are commonly fed dry hay and other food, much as in Winter, and they do well. If any of our readers have experience in this matter, we hope to hear from them.

Extraordinary Mutton.—Two Cotswold ewes imported and fattened by S. W. Buffum, Winchester, N. H., raised lambs at 1 and 2 years old, but not since, in 1860, weighed 340 and 350 lbs., respectively=690; in '61, 575 and in '62, at the time of their slaughter by Bryan Lawrence, Centre Market, N.Y., one *reported* 329--dressed **208 lbs.,** the other 321—dressed **215 lbs**. They were 5 years old. Mr. Lawrence sends one of them to President Lincoln, the other to Secretary Seward, in token of his appreciation of their services to the country. They are, so far as we can learn, the heaviest sheep ever killed in this country.

John Sanderson's Ox, "Constitution." We gave in the February *Agriculturist* (page 57), the measurements of this monster grade Short Horn Steer, not knowing that he was then on his way to this City, and to slaughter. He was purchased, exhibited, and finally killed by Bryan Lawrence, Centre Market, in whose hands we examined him before his slaughter, and from whom we obtain the following figures. Live weight 3,300 lbs., (having fallen off considerably since his 150 mile journey). Dressed weight as follows; Quarters, fore, 743 lbs., and 732 lbs.; hind, 496 lbs., and 502 lbs. Total of carcass, **2,473 lbs.** Hide 125 only, and Tallow 147... These figures show, so far as we know, unprecedented excellence. A heavier carcass than was ever before seen in New-York, (or elsewhere in this country we believe), of unexampled fineness; with smaller offal, lighter hide, smaller bone than we have ever known of in connection with so large an animal. The beef or proceeds of its sale are to be distributed among the poor of the City.

Smoke Stains on Marble.—Some one at Prince's Bay, who signs himself "Anti S. of Essex," in referring to the item on page 38 of February *Agriculturist*, writes: "Make a solution of chloride of lime in water, mix plaster of Paris with it to the consistence of paste, and apply to smoke stained marble. It will remove stains with no injury to the polish of the marble."

Feeding Value of Chess and Cockle Seed, and Corn Cobs.—Isaac Bachtel, of Stark Co., Ohio, states that many farmers use the screenings of their grain, and asks for the per cent. of nutrition in chess, cockle, and corn cobs.—No chemical investigation has yet been made of chess and cockle; the only estimate that could now be made must be derived from the results of their use, and no one ought to grow enough of these pests to make it worth while to inquire into the subject. Corn cobs vary greatly in value according to the ripeness of the corn when cut. The actual nutriment afforded is not much at any time, though as a divisor of meal, or to "fill up," we incline to the opinion that it is well to grind the cobs with the corn for working animals. They are probably as good as their weight of fine chopped dry straw.

The Largest Pumpkin—A Gourd Exhibition.—There has been on exhibition for three months past, at the office of the *American Agriculturist*, the largest pumpkin we have ever seen, and perhaps the largest one raised in this country. It measures 7 feet 2 inches in circumference, and weighed at first 204 pounds. It was grown by Mr. Geo. Barclay, of New-Hamburg, Dutchess Co., N. Y. Decay appears to be setting in, and it will need to be removed soon. The largest pumpkin we have seen noticed in Europe, was one of 242½ lbs., and more than 10½ feet in circumference, raised at Orleans, France; and one of 220 lbs., and 8½ feet round, grown at Paris last year. In England, pumpkins and gourds are classed together as gourds, but divided into "ornamental," "eatable." There is to be a grand Gourd Exhibition, including the two classes, by the Royal Horticultural Society of London, next October, when there will doubtless be some big things shown, both from Great Britain and the Continent. We fear the show will be too early for the exhibition of fully matured specimens from this country. Perhaps we may be able to compete if plants are started early, in hot-beds or green-houses. We may add, in this connection, that some Belgian growers are preparing to increase the growth of pumpkins by feeding the plants with milk and water—the fluid to be supplied by a rag leading from a vessel, and inserted into the peduncle (fruit stem) of the plant. At least so it is reported. We suspect, however, that the report arose from the practice of hanging a rag from a vessel of this manure water, so that it should constantly drop down upon the soil near the roots of the vine.

The N. Y. State Agr.'l Society, held its Annual Meeting in the Assembly Chamber, at Albany, on February 12th. The Treasurer's Report showed expenditures amounting to $12,179 and a balance of $142 on hand. The following officers were elected for the year: *President*, EZRA CORNELL, of Tompkins Co.; 8 *Vice Presidents*, viz.: Thomas H. Faile, of New-York; Samuel Thorne, of Dutchess; Herman Wendell, of Albany; Oscar Granger, of Saratoga; Solon D. Hungerford, of Jefferson; Thomas I. Chatfield, of Tioga; Patrick Barry, of Monroe; Samuel W. Johnson, of Cattaraugus; *Cor. Sec.*, Benjamin P. Johnson, of Albany; *Rec. Sec.*, Erastus Corning, Jr., of Albany; *Treasurer*, Luther H. Tucker, of Albany; *Executive Committee*, T. C. Peters, of Genesee; E. Sherrill, of Ontario; A. Hubbell, of Oneida; C. I. Hayes, of Otsego; W. Newcomb, of Rensselaer. Dr. Fitch was ill and prevented from presenting his report on Insects, but a letter was read from him on the Entomological results of the past year, and Mr. H. S. Randall read a valuable paper on fine wool sheep in this country.

"Association of Breeders of Thorough-bred neat Stock."—This Society was formed to enable breeders to gain a fuller and truer knowledge of the stock of the country claiming to be thorough-bred, of *all* the recognized breeds, and to promote the improvement of the same. The pedigrees of the animals of the members are recorded after thorough investigation, and it is supposed that none but flawless pedigrees can be found upon the books of the Society. The records of Ayrshire cattle are so full that we presume the Society will at once commence an Ayrshire herd-book; and as the publication of the Devon herd-book has been so losing a business that Mr. Howard proposes to discontinue it, this Association will very greatly favor the public by continuing this publication. See advertisement of Annual meeting.

Transactions of Agricultural and Horticultural Societies for 1862.—We acknowledge the receipt of the 43d Annual Report and Transactions of the Hampshire, Franklin, and Hampden Agricultural Society of Mass., from the President, T. G. Huntington, Esq.——Of the 9th Annual Report, Transactions of the Worcester North Agricultural Society, of Mass.——Of the Transactions of the Jefferson County Agricultural Society, of N. Y.——Of the Transactions of the Mass. Horticultural Society, from Eben Wright, Corresponding Secretary.

Geological Survey of Michigan.—We are glad to learn from a copy of the First Biennial Report of the State Geologist, Prof. Winchell, that this survey is in progress; but the appropriations are too limited for the importance of the subject. A hundred thousand dollars expended in this work during the next three years, would be the best possible investment that could be made towards developing the resources of the State, and the money would come back almost every year if not oftener. If the mass of the people fully understood the object and advantages of a thorough examination of the *soils*, minerals, salt springs, coals, fertilizers, etc., one, or two, or three hundred thousand dollars would be cheerfully set apart for the work. We are happy to be able to assure them that under the supervision of Prof. Winchell, the work will be well done. We speak from personal knowledge of his ability, and integrity.

Farmers' Clubs and Sewing Societies.—"Charley Clover," of Elizabeth, N. J., writes of the success, patriotically, practically and socially, of the meetings of ladies to aid the Sanitary Commission, which meetings were attended by the gentlemen in the evening. The institution has promoted the Union cause in so many ways, and is regarded with so much favor, that we suggest the formal publication of the *bans of union* between the Farmers' Club and the Sewing Society.

An Important Enterprise—The Co-operation of all our Readers Asked.

The project detailed below is one of general interest, not only to each of our readers, but to the whole country, and we ask special attention to the subject. It is well known that in this country we have no public system of gathering from year to year, and at different times in the year, *the statistics* of the *condition and probable yield of our growing crops.* This work should be done by the General Government, but at present it is not, nor is it likely to be for a year or two at least. When, for example, the wheat harvest approaches, there is the utmost uncertainty, not only as to the relative *amount* sown, but also in regard to the *condition* of the growing crop. Shrewd speculators, who have on hand a large stock of old grain, often circulate newspaper reports to the effect that owing to bad weather, insects, small breadth, etc., there will not be half a crop gathered. On the other hand, as the harvest begins, another class intending to become grain buyers, are interested in magnifying the yield for the purpose of depressing prices. Thus, not only the producers, but many dealers themselves, are in a state of doubt and uncertainty. Some farmers, influenced by one class of reports, hasten to sell their grain at any price they can first get. Others, seeing more of the other kind of reports, hold on tenaciously, hoping that, owing to the reported poor yield, they will realize higher prices than their neighbors. In short, there is such an entire absence of reliable statistics that all are in a state of doubt and uncertainty, and none more so than the non-commercial producers. This state of things we propose to try to remedy, to a small degree at least, if we can secure the aid and co-operation of our readers, in the following manner:

1. Let the readers of the *Agriculturist* in every town counsel together, and select some man who may be relied upon for good judgment, and general ability to estimate with some degree of accuracy in regard to the leading crops, wheat, corn, etc., (*a*), what is the amount of surface sown or planted, as compared with previous years; and (*b*), the *prospect* at any date. Wherever there is a Farmers' Club, let the Club choose the reporter. Let it be understood by him that he is desired to keep on the look-out, and be able to respond to all questions as to the prospect of the crops. Where any subscriber stands alone, and can get no one to cooperate with him, let him volunteer to act himself, and the very fact that his report is to go out to the country will lead him to be observant and make inquiries.

2. Let the name of such persons be forwarded to the Editor of the *Agriculturist* without delay.

3. To every such person we will send out a sheet of *blank forms*, to be filled up with a brief summary of the amount and condition of the leading crops of the different kinds. The blanks will be so arranged as to require very little writing in filling up, and therefore involve but little labor aside from that required to be well informed as to the condition of the crops.

4. One of these blanks to be filled up at given dates, say May 10, June 10, July 10, and August 10, and forwarded to this Office.

5. These reports will be published in tabular form in the *Agriculturist*, either in full or in a well digested summary.

It will be seen at a glance, that such a system of reports will be of immense value, not only to the country at large, but to every man who has produce to sell. Suppose that only five hundred or one thousand such reports should be gathered and published; yet, if they come from different parts of the country, it is evident that they will give at least an approximation to the average of the whole country. The reports should embrace a neighborhood, and not merely the reporter's own crops, for their condition may depend upon his own good or bad husbandry.

Such is the plan we propose. It will involve much labor and expense on our part, but we shall cheerfully undertake it, if our readers will so far co-operate as to present us with the names of reliable men upon whom we can call for the desired information.

Please act upon it at once. We desire *only one name at a Post-office.* When there are several subscribers at any office, and this is generally the case, let those who first happen to meet, talk the subject over, and in conjunction with others, select the man, and then some one send us his name and address. When there is but one subscriber, let him talk over the matter with his neighbors who are not subscribers, and among them agree upon some one to act as reporter. It is not at all essential that the reporter be a subscriber. What we desire is, the best man to fill up the blanks and return them to us. On receiving his name, we will enter it among those to whom blanks will be forwarded, with instructions how to make up the report. Since "what is everybody's business is nobody's business," will the reader of this please make this matter one of his own affairs to be first looked after. It needs no argument to show that such a system of reports will be valuable to every farmer, and that, since every other interest depends mainly upon the prosperity of agriculture, (as we clearly demonstrated last year,) all classes will be interested in getting the earliest and most reliable reports of the general condition of the incoming crops of the country.

Farmers' Prospects—What of the Future?

Could we spare the room, it would be pleasant to publish extracts from numerous letters which speak in strong terms of the articles on the market prospects, published in the *American Agriculturist* during the past eight or ten months. These statements voluntarily made, indicate that this journal has saved to its readers, in a single year, vastly more than it has cost the country during the whole twenty years of its existence. Multitudes speak of having realized ten to thirty cents per bushel more for their grain, than they would have received, had they not been induced to withhold their produce from market at a time when prices were at the lowest ebb, and when men's minds were filled with fearful forebodings. So much for the past. The object of many of the letters referred to is, to draw out some definite prognostication from us for the coming year. But here we find ourselves very much in the dark, for the time being. We will, however, offer some general suggestions:

1st. The deficiency in Europe is not yet supplied, and will not be fully met for months to come. In short, if every bushel of wheat that can possibly be spared throughout our country, be gathered up and sent to the seabord before the first of next June, England and France will take it all, and ask for more. The foreign stock of breadstuffs is rapidly decreasing, and we look for very large orders as soon as they can be filled on the opening of inland navigation.

2d. The present indications are, that *after* the next harvest the foreign demand upon us will be very small, if it do not entirely cease for a time. Last Autumn the season for sowing winter grain was very fine, both in Great Britain and on the Continent, and especially in the former, and the breadth sown was greatly above the average. Up to the date of our latest foreign reports, the winter weather had, on the whole, been favorable. Unless, therefore, the spring weather should chance to turn out very badly, so much so as to injure the winter grain, and interfere with the sowing of spring wheat and other spring grains, we can not look for much foreign help in our grain markets *after* June.

3d. In this country it is yet too soon to hazard even a "guess," as some of our readers ask us to do. The breadth sown last Autumn was not much, if any, above the average. It was generally got into the ground in good condition, however. Thus far the Winter has not been the most favorable. There has been too little snow to protect wheat well, and it has still to run the gauntlet of the warm days and freezing nights of March and early April. Wheat will stand the most intense steady frost far better than the expansions and contractions of the wet soil produced by cold nights and warm days. The weather from May 1 to harvest, insects, and dry weather at the time of gathering, may make half difference in the yield. All these circumstances taken into account, we shall hardly look for more than an average crop at best. And moreover, the fact that we had so large a yield in 1861, is rather against a similar yield in 1862, judging from the ordinary course of Nature.

3d. To counterbalance, in part, the expected cessation of a foreign demand, we shall have the fact that the country will be entirely drained of old stocks of grain—probably more so than at any harvest for several years past. This, of itself, will have a favorable effect upon prices, and should the yield turn out below an average, prices will be likely to rule high. One practical conclusion to be drawn from the above statement is, that farmers should prepare to sow a large breadth of Spring wheat.

4th. Much will depend upon the course of the war, and the financial policy adopted by Congress. We look for the termination of the war within a very brief period. It may extend into the Summer, and perhaps into Autumn, but this is scarcely probable. The restoration of peace will be likely to be followed by a sudden spring in all business operations, activity in manufactures, and high prices for all kinds of farm produce. A collapse will, perhaps, or probably, follow, and it behooves farmers, at least, "to make hay while the sun shines." If the country be flooded with a large amount of Treasury Notes, the price of everything will go up in proportion to the relative amount of circulating medium. It will be a good time for farmers to pay off their debts, and to avoid contracting new ones to be paid at a less favorable period. The most practical advice we can now give to farmers is, to prepare for the largest possible Spring planting and sowing; to save and use all the manure that can by any means be made available, and be ready for whatever may come. Do not be carried away by speculation, however high the current may run. Continue to practice the lessons of economy learned during the past dark period. Get the land and store debts paid off. Be content with present possessions, and not run into debt for more acres. Look into and develop the farm lying *under* that you now cultivate, which is already yours in fee simple.

TO THE MARKET.... From a Painting by F. Simon.

(Engraved for the American Agriculturist.)

The above spirited engraving we introduce for the pleasure of those that love to study agricultural scenes sketched by the first artists—and who does not? It suggests, also, a topic often dwelt upon in these columns, viz: the want of judgment exercised by very many farmers in selling off their *best* calves to the butcher. In our review of the N. Y. Live Stock Trade for 1861, given on page 58 of the February *Agriculturist*, it was stated that during last year there were sold in this city at the regular market yards, over *thirty three thousand* (33,388) veal calves, at an average price of $5.10 each. Probably seven or eight thousand more were sold direct to butchers, from boats and barges, and from wagons—in all over forty thousand. We stop not to discuss here whether it would or would not have been more profitable to have raised all these calves. The value of milk in and near New-York would probably decide the question in the negative. The point we would here make is this: A considerable number of these calves were "bobs," or "kittens" as they are called in market parlance, that is, calves two to six days old, which sold to some of the lowest class butchers at $1 to $1.50 each—sometimes $2. Taking out these, the average would range near $6 a head. Now, very many of these calves were large noble animals, that sold for $8 to $10 each, and these are just the class that find the most ready sale, and, we are sorry to say it, the class that farmers are most ready to part with, because they can get two or three dollars more a head for them. But it costs scarcely any more to raise to three years of age one of the best calves, than one of the poorer ones—indeed it often costs less. Yet at three years old the one animal will be worth ten to twenty dollars more than the other. It needs no figuring, no further argument, to indicate lack of economy in the present system. It is on a par with the following: Two brothers each received 80 sheep from the same paternal flock. One sold 20 of his sheep to pay for a Southdown buck. From the 45 ewes left he raised 52 lambs, worth the next Autumn $4.25 each—$221. The other bred his whole flock to a common buck. He raised 65 lambs, worth the next Autumn hardly $3 each—$195, from which deduct $19 for keeping the extra 19 sheep, leaving $176 against $221.

Goats on Farms—Mr. Greeley's Experience.

Friend Judd.—H. G. T., in the December *Agriculturist*, wonders what can be urged against the keeping of goats. I answer—not much, if you are living on the stony hills of Palestine, or the desert of Sahara, or the Plains of Colorado, or the parched, desolate valleys of Utah, where a tree is unknown and its production is barely a possibility. In fact, I think the goat destined to prove a great blessing to all that vast region lying westward of the banks of the Platte, and eastward of the Sierra Nevada. In a shadeblest, fruitful country like this, however, the goat is a nuisance and a terror. The utmost vigilance will not prevent the destruction of your rarest fruit and shade-trees, if you keep Billy and Nanny on your premises. I speak feelingly on the subject, for my experience has been a sore one. My last trial with a she-goat (bought for her milk for an infant,) and three young ones—all fine animals, but for their invincible propensity to eat any thing that should not be eaten. I am not certain that either of them would have barked a crowbar unless very hungry; but I would not like to insure the dry, cork-like rind of the big trees of California, (from a foot to eighteen inches through,) against the teeth of any goat I ever harbored. If you must have goats, keep them, for their milk is the best food that can be had for young children; but tie them fast in some lot where nothing grows that you want to survive, or shut them up in a barn, and be sure they never have a chance of liberty. A goat at large on a Yankee farm woill d more damage in a single week than can be repaired in ten years. H. Greeley.

A Talk about "Pedigrees."

"*Like produces like*" is the adage of the stock breeders; but it has some very important exceptions. Thus, for example, animals sprung from parents of different breeds, (or of no breed at all,) produce offspring unlike themselves and of no uniform type, unless they be paired with animals of some breed having *fixed* characteristics, when these fixed characteristics will generally be prominent in their offspring. A fixed or established breed is one of which the animals for many generations have exhibited the same general peculiarities, transmitting them to their progeny. The more uniformly these or any desirable peculiarities appear in any line, the more likely are they to reappear in coming generations; so certain is this, that breeders count with absolute confidence upon the value of the off-

spring of animals concerning whose ancestry they have full knowledge. This gives value to those *records* of the sires and dams of animals, running back several or many generations, which are called PEDIGREES. The facts above stated account for the great value attached to horses and neat cattle for breeding purposes which in addition to symmetry and beauty of form have excellent pedigrees. Whoever breeds from such stock feels sure that the progeny will, according to certain laws, be like the parents.

The influences of climate, food, treatment, and the purposes for which animals are raised and employed, all affect more or less uniform changes in the animals of any country where these influences have prevailed. The result is, that in each of the old countries where there has been but little change or importation of animals, the neat cattle, for instance, possess definite characters which mark them as distinct races. The same is true of sheep and swine in a marked degree, and of horses also very much in the same way, except that as horses have so much wider range than other cattle, the different races are separated more distantly, or by barriers hard to pass. So we find in Arabia, where horses are used under the saddle and valued and bred for speed alone, a race of fleet running horses. In New-England, on the contrary, saddle horses have gone very much out of use. The gait sought is the trot, and fleetness is also highly prized. We find there a class of horses bred for those ends, now becoming possessed of distinct traits and likely soon to be recognized as a definite breed, distinguished primarily for fleetness in the trot. The cows of Ayr have been bred for milk. Those of Jersey for cream. The Teeswater and Durham cattle (from which sprung the improved Short Horns) for beef. The same holds true of other kinds of animals.

Individual characteristics as well as those of the race, are communicated to the offspring, but the former less surely. When certain peculiarities are transmitted for several generations they become grafted upon the race, or rather upon the particular family in which they occur. When there are valuable traits or qualities, the value of the animals possessing them is increased. And an animal has still greater value if it can be *proved* that he draws his blood through a long line of such ancestry, because it is then certain that he has the power to impress the same characteristics upon his progeny. This, then, is the reason that pedigrees are so important, and that so much pains are taken to have them recorded in herd-books, turf registers, etc., and also to be sure that they are *true*. To give value to an animal its *pedigree* must be true, and show no mixing of the blood of different breeds, or of ill-matched families of the same breed, and exhibit a *line of ancestry* distinguished for the qualities which it is desired to have in the offspring.

Making Poultry Profitable—The Items.

In the February *Agriculturist* (article "Poultry and Pork,") may be found the results reported by Mr. J. C. Thompson of Staten Island. How he accomplishes these results he states as follows:

THE HEN-HOUSE.—Mine is a lean-to—10x16 feet—10 feet high on the rear and 8 feet front, facing the South. A barn stands on the East end; a shed on the West end, with a glass front, for a shelter and feeding place in cold and wet weather. The roofs of both project three or four feet, which keeps the ground dry in front and about the entrance. The back and front of the house are lined, or double boarded, and the front has three glazed sashes—furnished with inside shutters—a ventilator 16 inches square is placed in the roof, with a valve hung at the bottom, to close, more or less, as may be required, in cold and stormy weather.

ROOSTS.—A frame is made and hung to the rear of the house, which can be set at any desired inclination; the roosts are placed lengthwise on the frame, ladder-like, about 18 inches apart. As all fowls seek the highest roosts, these are filled first, and others in succession. This brings them close together in cold weather. In warm weather the frame must be leveled to make them scatter on all the roosts, and keep cool as possible. The floor being concreted, it is easy to clean, keeps out rats, and makes it dry. Under the roosts I place fine charcoal (a poor plan to use charcoal—ED.) or dry earth, or muck, to absorb the droppings; a few shovelfuls added each day keeps the house free from any bad odor. The rest of the floor should be covered with saw-dust, dry earth, chaff, or cut straw, for, in cold weather, hens like to keep their feet dry and warm. Neither *coal* nor *wood ashes* should be put in the house, as they act on the manure, and decompose the uric acid, thus wasting ammonia, and making the house offensive.

FOR NESTS—Use butter or lard tubs (which can be had at the grocer's for 6 cents each) set on shelves at the ends of the house, one to two feet from the floor—portable nests (with glass nest eggs) are best. They should be often cleaned and supplied with fresh straw or hay. The grease on the tubs is a remedy against lice. [A good idea.—ED.] Greasing the roosts at all the places where they touch the frame, and in fact, the inside of the house and roosts, with any kind of soft grease or fish oil, is certain to destroy them, as they cannot live a moment in grease. A paint brush or whitewash brush can be used for applying the grease, which should be done early in the Spring, and again in Summer, if it appears to be required.

MODE OF FEEDING.—I give only sound grain; no other should be used. A variety is not objectionable. My standing dish is wheat screenings; this is always by them, in a box slatted up at the sides for the purpose, as a feeding box. In Winter scalded corn meal or ground corn and oats is given to them warm in the morning; but the main food must be hard grains. They must be well supplied with finely cracked oyster shells, gravel and mortar, and green food in Winter. Mine consume two or three heads of cabbage daily. They get the scraps from the table, scrap meat, etc. In Summer, grass, lettuce and cabbage are furnished daily in abundance—they will consume a great quantity.

YARD ROOM.—The permanent yard is 50x50, opening into a grazing and rambling lot of 50x100, also used as a plum orchard. The fence is only 5 feet high, and by feeding well and clipping the feathers on one wing, there is no trouble in keeping them at all times within the yard.

SETTING THE HENS.—To insure good healthy chicks, the hens should be set in March, and certainly not later than April. By having portable nests, when hens desire to set, and become fixed in the habit, in the setting season, they can be supplied with eggs, (the date of setting marked on them in ink or pencil,) and any number of nests moved to a room for the purpose, which must be kept closed, and well supplied with food and water. The nests may all be set side by side, for if the hens should all leave their nests at once, to feed, when they return they will each take a nest, although they may change places. This arrangement insures their setting steady, as they are not compelled to wander off for food, but return quickly to the nest, and keep up the warmth of the eggs, and thus bring out strong chicks. By setting a number at one time, if some hatch half broods, they can be put together with one hen. When a setting hen looks pale about the head, it is evidence she is lousy; clean and wash the nest, grease the hen under the wings, on the back and rump, wash the eggs in warm water, and return to the nest [Better transfer to a new, clean nest.—ED.]

TREATMENT OF CHICKS.—When first hatched, they must be fed on bread soaked in milk; after three or four days, feed with cooked or scalded Indian meal, three times a day; but finely cracked corn, or wheat screenings, should be always within their reach; also clean water. The hens with chicks should be kept in coops for several days, the coops kept dry and clean, and placed in sheltered places. With such treatment not five per cent. of chicks will be lost. In conclusion let me say, the secret of success with fowls is this. They must be *young, well fed*, and *cared* for, and small numbers, 12 to 25, pay much better in proportion than large flocks.

J. C. T.

What does it Cost to Keep a Horse?

We would be pleased to receive for the *Agriculturist* some brief accurate statements, going to show the average cost of keeping a horse for a year in different parts of the country. As the market value of grain and hay varies greatly, it will be best to give the average amount of each kind of food consumed by two or more horses. As a guide we present the following items from an English Farmer's Note Book. The table gives the yearly *average* for 6 horses, during a period of 8 years.

Average Yearly Expense of each Horse.

64½ bushels of Oats, @ 62½c	$40.31
1 tun of Hay in Spring	15.00
2 tuns of Straw and Chaff, fed in Winter	10.50
9 weeks Pasturage in June and July	9.00
Harness and Shoeing	5.25
Average yearly loss by age and death	25.21
Annual Cost per horse	$105.27

This is estimating at English prices for food. The horses were valued at $110 each. During the 8 years 11 horses were lost by various diseases and accidents, making a total loss of $1,210, or $151.25 per year, or $25.21 on each horse. As 11 new horses were purchased during the 8 years, it is probable that the stock was as good at the end as at the beginning of the period; but about $8 should be allowed for the annual interest on the value of each horse. Each horse averaged 258 days of farm work in the year. Merely for example, let us make out two similar tables for this country, taking the same amount of food, but substitute one tun of hay for the two tuns of straw and chaff, and allow four months pasturage.

Yearly Cost of a Horse in more expensive Localities.

64 bushels of Oats, @ 40c	$25.60
2 tuns of Hay, @ $14	28.00
17 weeks Pasturage, @ 50c.	8.50
Harness and Shoeing	5.00
Annual Loss per horse	25.00
Interest on Value	8.00
Total Cost for a year, say	$100.00

Yearly Cost of a Horse in less expensive Localities.

64 bushels of Oats @ 20c.,	$12.80
2 tuns Hay, @ $8	16.00
17 weeks Pasturage, @ 25c.	4.25
Harness and Shoeing	5.00
Annual Loss	20.00
Interest on value at say $100	7.00
Total Cost for a year, say	$65.00

As above hinted, these tables are not given as accurate, but merely as a form for the guidance of such as may be disposed to furnish more definite information from their experience.

Farmers Wide Awake.

There are all sorts of farmers in the world, and they, accordingly, meet with all sorts of success. There are intelligent, enterprizing, industrious, economical men; and over against these are ignorant, shiftless, wasteful men, who are seldom prosperous. If the lack of activity and thorough business habits which prevails in many of our farming districts, were suddenly transferred to our large cities, and made to pervade our bankers, merchants, publishers and tradesmen, what a shock it would give to the wheel of commerce! Many a door would soon be closed by the sheriff, and grass would grow in our streets. Manufactures and trading generally are conducted with carefulness and economy, with constant attention to details, watching against losses, seizing upon all possible advantages, and with an industry that never tires. This and this alone is the royal road to success.

Now, agriculture, to be prosperous, must be conducted in the same way. The farmer must be a shrewd, thinking man, one who knows at least something of the theory and much more of the practice of his calling; knows how to bring his lands into the best possible condition and to keep them so; knows how to take advantage of the market; how to get the best returns from a given amount of money and labor; knows how to economize, and how, at times and as wisely, to make large expenditures, (say, in draining, manuring, etc.,) when they are demanded. For, in farming, as well as in acts of general benevolence, "there is that giveth and yet increaseth; and there is that withholdeth more than is meet, and it tendeth to poverty."

It is the importance of sagacity, prudent forethought, and management, of skill and enterprize that we wish now to inculcate. Mere muscular labor, however severe and unremitted, is not enough; book learning is not enough, if disjoined from industry, tact and economy. There is an ideal in every farmer's life, towards which he should always be striving to approach. He should aim to be a man of general intelligence. Aside from the topics of reading and study common to every well-informed man, it becomes him (and it pays) to be familiar as far as possible with practical chemistry, meteorology, geology, mineralogy, botany, animal and vegetable physiology and mechanics. Surely, there is no need of mental inactivity here. Nor should he be merely a man of books and 'ologies. He ought to be a practical, sound-minded, industrious, common sense man, as familiar with all practical details as with theories. There are already many such farmers: we only wish there were more. And ere long, there will be.

How a Woman's Perseverance secured a Fine Homestead.

The following is copied from a recent letter, to the *American Agriculturist*, from one of our German subscribers in Tipton County, Ind., and is but an imperfect pictureof what has occurred, and is still occurring, in many western localities: "About twenty years ago a young couple came here, and bought 160 acres. Though the price was low, the purchase money nearly exhausted their means. They began with hard labor to build themselves a future homestead, and through all the hardships of their undertaking, the young wife was at the side of her husband, and even shared his out-door toils. One day, when they were both trying to fell one of the big oak trees, the man, exhausted and discouraged, said: "I think we had better give up, and try some other business, we will never succeed in this." Thus saying, he put down his ax. But the woman was not so easily disheartened. "Oh! cut away!" she said, "we will conquer these trees by and by, and we *will* have a nice farm before long." These words gave new strength to the man's arm, he commenced to work again. Now, in 1861, they have a beautiful farm of 200 acres. They are 'well off,' as people say. At the county fair the woman received premiums for her fine apples and grapes. The daughter had good needlework there, and the father exhibited excellent horses and mules. He has a thousand bushels of corn in his crib. He reads the *Agriculturist*, and procures good books for his wife and children to study. The husband often relates the story to a circle of friends, and says that he would not have had this farm and independent homestead, but for the perseverance and encouragement of his wife on that day."

Washes for Trees.

Complaints are made, here and there, that certain washes for the bark of trees do more harm than good. One, whose apple trees were mossy and hide bound, and infested with insects, used lime-wash; another used soap; another tar; another, a solution of potash; but in nearly every case, with unsatisfactory results. The caustic lime kills the parasitic plants and the vermin which infest the bark; but while a good part of it soon washes off, what remains becomes converted into carbonate of lime, which fills the pores of the inner bark, and prevents its healthy expansion and growth. Common soap suds is less hurtful than the solutions of caustic potash or the tar.——The safest and best wash known to us, is simply a solution of common salsoda, (often called bleacher's No. 1 soda,) dissolved in rain water, at the rate of one pound of soda to a gallon of water, and applied in Spring and Fall. It will not hurt the tree, but will destroy mosses and other fungi; and no eggs or cocoons of vermin can stand before it. It will work off the dead bark, and leave a clean and healthy surface. But to ensure the highest success from this application, the soil about the roots of the trees should be drained if it is wet, and be manured if it is barren.

To Exterminate Pea-Bugs.

"What shall I do to rid my peas of bugs?" exclaim both gardeners and farmers. And we will attempt a reply. The pea-weevil, a small, brown bug or fly, appears early in the Spring, at the time the first crops of peas are forming their pods. He stings the tender pod, right against the nascent pea, and deposits an egg. Sometimes he punctures every pea. A grub is soon hatched, which eats his way into the heart of the pea. Here he grows apace, and by the time the pea is ripe he is full grown, about an eighth of an inch long. He is now a white grub, and has eaten out nearly one half of the pea. His next step is to pass into the pupa state, where he remains until the last of autumn, when he becomes a black beetle, and is prepared, on the opening of Spring, to attack young peas and to reproduce his kind. This being the natural history of the insect, we may judge when and how to attack him. The black-bird, crow and oriole are his born enemies, but they do little towards exterminating him. Of the several methods employed successfully, here is one: Make as many wooden boxes as you have varieties of seed, and fit them with tight covers. After gathering, sorting and drying the seeds, put three or four bits of camphor, the size of a pea, into each box, shake well together and put away. The bugs will be disgusted. Another way is, to scald the seed for about half a minute in boiling water, just before planting. This will, at least, destroy the grubs in the seed. If peas are buggy, we usually take our seed, a peck at a time, and just before sowing, pour in boiling water enough to cover them; then stir until cool, and sow. The scalding has never appeared to injure the germs, while it utterly destroys the bugs, and hastens the sprouting. If too large a mass of peas be taken together, or if rapid stirring be omitted, they might be injured by the heat.

Another is this: Gather the peas as soon as ripe, dry them for two days in the sun. Then put, about a pint at a time, in a colander, cover with a pan, set them over a vessel of boiling water, keeping them there until the steam has penetrated the whole mass of seed. Then spread them out to dry, and put away in boxes or papers. This will kill the pupa, while it will not injure the germ of the seed.

Peas sown as late as the middle of June, are seldom infested with the weevil, because its period for depositing eggs is then past. It is a common and good practice to sow peas for the next year's seed very late in the season.

Birds and Insects—Striking Figures

Prof. Treadwell of Cambridge, in a recent communication to the Boston Natural History Society, relates the following gastronomic feats of the Robin redbreast. "By experiment it appears, that though the bird's food was increased on the 11th day to 40 worms, weighing 20 pennyweights (1 ounce), the weight fell off; and it was not until the fourteenth day, when he ate sixty eight worms, or 34 pennyweights, that he began to increase. On this day the weight of the bird was twenty four dwts.; he therefore ate forty one per cent more than his own weight, in 12 hours. He weighed after it 29 pennyweights, or 15 per cent less than the entire food he had eaten in 12 hours. The length of these worms, if laid end to end, would be about fourteen feet, or ten times the length of the intestines. To meet the objection that the earth worm contains but a small amount of solid nutriment, on the twenty seventh day he was fed exclusively on beef, in quantity 23 pennyweights; at night the bird weighed 42 pennyweights, or but little more than twice the amount of food consumed during the day—not taking into account the earth and water swallowed. This presents a wonderful contrast with the amount of food required by the cold-blooded verterbrates—fishes and reptiles, many of which can live for months without food. It contrasts also with that required by mammalia. A man, eating at the same rate, would require about seventy pounds of flesh a day, and drink five or six gallons of water."

We think few were prepared to believe such facts in regard to the robin, whatever may have been their impressions of the usefulness of this bird. A pair of these birds in a garden, with the average of four young ones, would eat two hundred and fifty worms, or their equivalent in other insects, daily! Of canker worms and caterpillars when they first come out, this would amount to several thousands daily. It would not take a great many birds to keep a garden clean at this rate. We have heard of men who

boasted that they could whip their weight of wild-cats. The robin not only whips his weight of savages every day, but destroys them and converts them into excellent guano.

There can be no doubt that Providence intended birds as a police to keep the insects in check, and if we will keep the cats and boys under, and give the birds a fair chance, we may again have plenty of fruit and grain.

Celery as a Field Crop.

A New-Jersey market gardener communicates to the Gardener's Monthly the following method of growing celery, which he represents as being easy as raising a crop of cabbages:

"The ground necessary for the growth of celery need not be damp, as is generally supposed. Any good, rich vegetable soil, if level, is sufficient. Although the plant luxuriates in moisture, if properly applied, yet it is as quickly impatient of stagnant water at the roots as almost any other vegetable. One of the best varieties for private culture is the Incomparable Dwarf, a solid, white variety, never attaining more than two feet in length, but of the most delicious flavor. This variety is particularly well adapted to this simple mode of cultivation, which consists in planting the plants on the surface, one foot apart *each way*, so as to form a square bed. The object in having the plot thus square or oblong is, that when the celery is so planted in a mass, the plants crowd each other when full-grown, so that in the struggle for light, the hearts are drawn upwards—one of the most important objects to be attained; which, when the celery is planted in single or double rows, can not be attained, without the processes of what we call "handling" and "hoeing up." The time of planting is usually the month of July; but if good strong plants can be had, fine celery may be grown by planting in August. Nothing further whatever is necessary in its cultivation but simply hoeing to encourage growth and keep down weeds, as is done in a cabbage or onion bed. This, then, is the whole process from the time of planting in July until November. Thus far, it is, of course, green, unblanched; the blanching process being done when stored in winter quarters.

The time of digging up of course varies somewhat in different localities. In this district we usually have all put away by the middle of November; and after ten years' experience, we find no plan so simple or so safe as the trench system for blanching or preservation.

The process consists in digging a trench or drain ten or twelve inches wide, and of the depth of the length of the celery. The celery is then packed *perpendicularly* in the trench, moderately tight, until the whole is filled up. It will be understood that there is no soil thrown in about the roots—none being necessary. The roots, being at the bottom of the trench, quickly absorb sufficient moisture to encourage new roots, which, as soon as formed, the blanching process is begun, and the celery will be fit for use in four or six weeks from the time of being put in the trench. It is indispensable to cover the trench with leaves or stable litter to the depth of six or eight inches; but this must be done gradually—two or three inches at a time—as the season advances. If put on at once, it stops the evaporation from the mass of celery packed in the trench, and the blanching being prematurely hastened, it will not keep so well. A great advantage we find in this way of preserving winter celery, is in the easy access we get to it in all weathers,—nothing more being necessary than to remove the litter and take out what is wanted, and cover in carefully again."

[A cheap easy way of raising celery is certainly a great desideratum, the above is worthy of a fair trial on a small scale. We fear the celery will not be tender.—ED. *American Agriculturist.*]

Halsted's Hand Seed-Drill—Not Patented.

We present below engravings and a description of a new Seed-Drill, on exhibition at the Office of the *American Agriculturist.* It was designed and constructed by Mr. A. M. Halsted, a farmer of Rye, Westchester Co., N. Y., and the implement shows a good deal of ingenuity and mechanical skill in the maker, who, in addition to the ordinary farm tools, has only a common foot-turning lathe and the assistance of a neighboring blacksmith. He constructed one at first for his own use, but it operated so well that several of his neighbors have also had them made. Mr. Halsted, however, believes in every man "sticking to his trade," and as his business is farming, he offers the plans of his seed drill freely to any or every one who desires to make them for home use or for sale, and he offers his patterns to any respectable manufacturer who will put the machines into market.

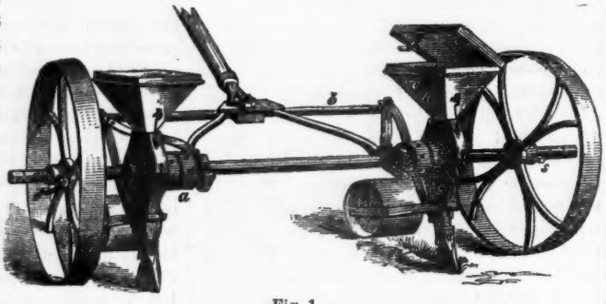


Fig. 1.

DESCRIPTION.—The size of the apparatus may be understood from the engraving—taking the wheels at nearly one foot in diameter. The letters in figs. 1 and 2 refer to the same parts. The two wheels may be fastened further or nearer apart upon the axle, being held at any point by the screws, *s*. The seed distributors are similarly adjustable, so that the implement can be used for sowing rows at different distances apart. The implement of this size and form is designed for the smaller classes of seeds. The seeds are put in the boxes or hoppers, *h*. Fig. 2 shows an enlarged section of the hopper, raised up, and of the rest of the distributing apparatus, made by cutting down through from front to rear. The seed measurers, *a*, fig. 1, (*i* fig 2,) are little solid cylinders, with cup-like holes in the surface.

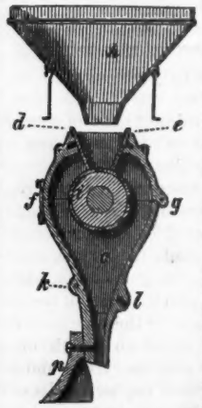


Fig. 2.

These cylinders differ in the number of holes, in their distance apart, and in the depth and size of the holes—different ones being used for different kinds of seeds. The slide, *d*, is also movable up and down, so as to be made to fit the measuring cylinder more or less closely, and this increases or diminishes the amount of seed. The seed box, *c*, opens on a hinge at *g*, and is fastened down by a hook at *f*, to allow the change of cylinders. The seed drops from the measurer into the cavity *c*, and falls into the furrow made by the small hollow plow, *p*. The roller, following the plow or drill, covers the seed. The frame of the roller is attached at *k*, and the bracing rod for steadying the apparatus is fastened at *l*. All the parts are shown so plainly that further description is unnecessary.

Drilling better than Broadcast.

Drilling in field seeds is becoming quite common, but not enough so. Too many still adhere to broadcast sowing greatly against their own interests. It certainly stands to reason, that twelve stalks of wheat, or oats, or other grain, will do better if each grows on a plot three inches square, than if one such plot contain three or four stalks crowded together, while another plot has none. But this happens very frequently in a field sown broadcast. Again, if one seed be covered but half an inch, and the next one be worked down three or four inches by the harrow tooth, the two will come up unevenly, and grow unevenly. Air and sun-light are important agents in promoting the growth of plants, and the full effect of these can only be secured where the stalks are growing at something like uniform distances apart. The expense of a drill is the main objection to its introduction everywhere. But a single bushel more of grain per acre, on a ten or twenty acre field will go far to meet the cost of the drill, or at least pay a very high interest on the cost. And who doubts that much more than the extra bushel will always be secured by judiciously using a seed drill.

About Farm Implements.

It is "penny wise and pound foolish," to buy poor implements because they can be got *low.* Such will cost a vast deal of time and patience, and no little money to keep them in order, and even then not work satisfactorily. Moreover, there is a great deal of pleasure in using a machine or simple tool of the best make, not because they are expensive, but because they are handiest, and on the long run they are the best and cheapest. The interest at ten per cent is only $1 a year on an implement costing $10, while it is 50 cents on one costing $5. Very often the $10 implement will save half a dollar a day over the $5 one, by its better work, and saving of man and team power. Nor is this all that is important about implements. When bought, they should be taken care of. Before attempting to use them, they should be put into perfect working order. The knives of a mowing-machine should be well ground, the wheels and joints oiled, and the whole gearing put into complete trim before starting it; otherwise it will get out of order, time and patience will be lost, and the whole work be done unsatisfactorily. The same is true in general of harrows, horse-rakes, rollers, plows, hoes, shovels, and the commonest tools of the farmer's carpenter shop. Have a place for everything, and then keep everything in its place, and always in good working condition. But where do we often find the farmer's im-

plements? To-day, we saw a plow standing in the furrow, and yesterday one thrown up by the side of the fence where the Fall plowing ended. Last Fall, we saw cultivators and horse-rakes dragged up into the corner of a field among the bushes. Sometimes, the expensive horse-power, instead of being carefully housed, is left out in all weathers, from one thrashing season to another. Implements so used, seldom get their iron-work oiled to prevent rust, or their wood-work painted to prevent rot. It is the testimony of all good farmers, that the time and money spent in painting their tools, is more than repaid in their increased durability. There are very few farmers who can afford to have such large holes in their pockets as this carelessness makes. One must be either very rich or be making money very fast to be able to support such extravagance. If it be true, as it is often said, that farming, as a general rule, does not yield more than five per cent on the capital invested, we do not see how any body can afford such expensive habits. And besides, such a spendthrift style of living exerts a bad influence on one's family and on the whole neighborhood in which he lives.

Blinks from a Lantern....XXIX.

VISITS RUNOUT ROGERS.

Not a dozen miles from Higgin's Rest (described in the *Agriculturist* last year), lies the farm of Runout Rogers, or what was his farm, before he sold it, for he is to vacate on the first day of April, 1862, according to the terms of sale. Just what his mother was thinking of when she named him, I am not able to say. It is not a scripture nor classic name, or one belonging to the family. He was the youngest child in the family, perhaps seen to be the youngest and last from his birth, and on that account named thus, according to a custom that prevailed in the early history of this country, of naming children from some circumstance attending their birth or infancy. At any rate, the name was appropriate and prophetic, for he has run out every thing left him by his father, and pretty much all that he has earned, so that at the age of fifty years, when a man ought to have a competence and to be looking forward to a comfortable old age, he is obliged to sell the homestead to pay his debts and square up with the world. When this little job is attended to, he will not be worth a red cent. He was left at the age of twenty three with a fine dairy farm of two hundred and sixty acres, with no incumbrance upon it except a debt of five hundred dollars due to a married sister, who had not received her portion by that amount. It was the homestead of the family, all the buildings were in good repair, and the land in good heart, capable of keeping thirty cows with all the other stock needed upon a dairy farm. It was judged to be worth, at the time of his father's death, ten thousand dollars. He had made money upon the farm, paid for it and the stock, and left, at the time of his death, an estate worth twenty five thousand dollars, which made a rich man among farmers in the last generation.

I was drawn to the place by a sale of cattle, the last remnant of the stock—thirteen cows, a yoke of oxen, and horse, being all that the farm is now capable of keeping. The sale was hastened on account of the short crop of hay, and the well founded apprehension that the crows might forestall a sale if it was put off until Spring, when such sales usually happen. The place has the neglected air of a slipshod farmer, where no repairs had been made for twenty years, beyond those which necessity compelled. Shingles will wear out, and paint will grow dingy, and fences become dilapidated in that time. The mortar had rattled out of the chimney, and the dozen displaced bricks from the top proclaimed alike the passage of time, and the breach that was made in the fortunes of the owner. The house had, originally, been painted red, and then white, in the last days of the elder Rogers. It had been innocent of oil and white lead ever since, and the red and white appeared in about equal proportions, except where the weather had effaced all traces of paint. Here and there a clapboard had entirely disappeared, and occasionally one hung by a single nail, rattling doleful music in the winter wind. The bars were generally down about the premises, and the gates unhinged. Many of the bar posts had been split and bound up temporarily with white birch withes. No walls had been re-set in the days of the present owner, and the foundations were badly hove with the frost, and the tops were full of gaps. The barn had no cellar, and no sheds; the practice of the former owner having been to winter the most of his cattle at the stack yard—a practice that the son had most faithfully followed. The cattle had been gathered in the yard for the sale, and presented a very hirsute appearance. They were exceedingly thin in flesh, the rib-bones prominent, and the back arched, probably from the habit of drawing up into the smallest possible compass during the keen winter blasts.

"What makes your cattle so fat Mr. Rogers?" I asked courteously, to draw out his views on stock.

"The Fall feed was rather better than common, and as I had not hay enough to keep them through the Winter, I intended to give them all they could eat, to get them ready to sell."

"And how long have they had full feed?"

"Well, I guess about a week. I should have begun a little earlier but I did not calculate to have the sale so early. Hay was so high that some of my creditors thought it would be worth more to sell now than to feed out this Winter."

"So you are in debt Mr. Rogers?"

"I am in nothing else," he replied sorrowfully, "and never have been. You see I was in debt five hundred dollars when I begun, five and twenty years ago. But I had a large farm, and a good one, and it used to bring in crops and produce worth fifteen hundred dollars a year, so that I had enough of every thing, and did not pay any particular attention to the debt. I could have paid it then easy enough, in two or three years, but I let it run without paying the interest. Somehow the farm did not produce as it used to when father owned it, though I did every thing about as he did only I did not make so much manure, as I always thought it cost more than it came to, to cart dirt into the barn yard, and then cart it out again. After a few years I found I did not bring the year around without getting in debt, and I had to hire money to pay up my store bills. The seasons seemed to change, the Springs were backward, and the frost come early in Autumn, killing the corn and spoiling the after feed, and I have had to reduce my stock and get in debt, until every thing is mortgaged, and I have now had to sell out entirely to get square with the world. Don't you think the land is running out round here?"

"I rather think *men* have run out." I replied, bringing the glare of my lantern full in the face of Mr. Rogers. The man looked blank, probably not half comprehending my meaning. But here it is—the same old story over again—the soil ruined for the want of brains to till it. You talk a great deal in the modern age about improved implements of husbandry and improved tillage. The greatest want of all is improved men. A *man* in the place of Runout Rogers would have kept this old homestead improving, so that it would support a hundred head of cattle. The soil has run out for want of a man to till it.

If I might trace the process by which he has lost his farm, I should say his first error was that he has paid no particular attention to his business. Farming is as much a business as buying and selling merchandize. The merchant that never takes account of stock and balances his books to see how he stands, soon fails. Mr. Rogers never did this, and so had no reason to suspect he was losing ground until half the value of his farm was eaten up with debts.

Then he has paid no attention to manure making, which is the sheet anchor of good farming every where. With a stock of thirty cows when he took possession of the farm, he never made over a hundred loads, and it has been growing less ever since. He had all the facilities for making six hundred loads a year, and only lacked the enterprize to do it. There is a muck bed of seven acres, so deep that no bottom has ever been found, within a quarter of a mile of his barn.

Again, he has sold grain and hay instead of feeding it out upon the farm, thus compelling a reduction of stock and smaller sales of butter and cheese, and of other animal products. His stock have had no shelter in Winter, thus costing him ten dollars a head extra for feed, and diminishing their product of milk during the Summer. His fences have not been kept in repair, and he has lost some of his crops every year by unruly cattle. The result has been, a running out process all round—less grass in the pastures, less hay in the meadow, less stock in the yard, and fewer pigs in the sty, until a sheriff's sale closes the scene. Is there not a moral in the life of Runout Rogers?

A Cheap, Strong Wind Mill.

There are many kinds of half-hard labor to be done upon the farm, more fatiguing from their constancy, than their intensity, for which some cheap power is wanted. A few of these operations are: churning, washing clothes, grinding apples for cider, mashing grapes, currants, and blackberries for wine, sawing wood, cutting hay, straw, and roots, shelling corn, etc. These are usually performed by hand labor, but it is tiresome to continue them steadily, and we see no reason why a good, cheap wind power may not be constructed, which shall take the place of manual labor. The power may be light, and even portable. It should be self-regulating, cheap, simple, and very strong in its ability to resist high winds and rough usage. Why such a mill is not in common use, is a question we refer to farmers of mechanical turn of mind, whose name is legion. We know of no such mill.

Attend to the Wood Lot.

In reference to the expediency of thinning out wood-lots, opinions differ. Some wood men hold that a forest should not be touched with the ax except when it is purposed to sweep the whole down. After this is done, say they, we may clean up our ground for crops, or may let a second growth of timber spring up. Others hold that a lot may be judiciously thinned every year or two, and thus renew the timber gradually, without ever cutting down the whole. For an old forest, where the trees have nearly made their full growth, and where there are only a few young trees, and they quite small and poor, thinning out will do very little good. The old and middle aged trees have grown tall and slender, and have got their character formed beyond much improvement. Their roots are small and run near the surface of the ground, and if we take away the surrounding trees, these slim and unanchored sons of the forest will be sure to topple over. And then, the few young trees will grow not nearly so fast, and never become so vigorous and handsome as they would in a more open situation. The better way then is to cut off the whole race, and begin anew. If the lot is fenced in, and *fires* and *cattle* kept out for several years, the young wood will make a vigorous growth, and a new thrifty forest appear with marvellous rapidity.

But suppose the wood-lot is a comparatively new one, the trees from fifteen to twenty feet high; then by all means thin out. For, when in mixed woods, trees are allowed to grow up indiscriminately, there will always be more than the ground can well sustain. Their roots will ramify in every direction, filling the soil with a massy net work, crowding and exhausting each other. Thin them out judiciously, and then there will be pasturage enough for the roots of all. The trunks and tops of those left will be better formed than they could otherwise be. A writer on forestry says that "in raising a plantation for timber, the approved rule for hard wood trees is, to leave a space around each tree equal to one-half its height; and for resinous trees, a space equal to one-third its hight. This should be kept in view from the moment the thinnings commence."

From this same source, and others, we learn that in Germany this matter is regulated by the government. Competent and educated agents are appointed, who see to it that no forest is destroyed through wantonness or neglect. They plant new woodlands, first plowing the fields selected and sometimes fenced in, and sowing the seeds of various trees. The crooked and feeble seedlings are pulled up the second year, and good vigorous ones are supplied in their places if necessary. In about ten years a radical thinning is made, only enough trees being left to just shade the ground. In this work of tilling the land and thinning the forests, a multitude of the peasantry find occupation, who would otherwise suffer for want. Shade is indispensable to the growth of the seedlings of many, indeed of most of the forest trees. When a forest is to be cut down, and re-seeded with the same kind of timber, the thinning out is carried to that extent, that but a few of the most sturdy and most fruitful of the monarchs of the forest are left. The ground then being cleared and prepared for the seed, as soon as a good mast is had, the new forest is sown—and the old trees stand a few years to protect the young growth. Probably we should not like to have the government interfere with our forests, but the foregoing will show how much woodlands are valued abroad, and how deserving they are of intelligent care. Our own interests and those of our posterity are concerned in this thing, and we should give it our best consideration.

Pickling Wheat and Other Seeds.

Hewitt Davis, says, in the Agricultural Gazette, that his practice for many years was to use copperas, arsenic, and other mineral poisons, for preparing wheat for sowing, as a means of preventing smut, burnt ear, etc. But having lost a valuable lot of turkeys which accidentally got into a newly sown field, he was led to think further on the subject, and came to the conclusion that the benefit of pickling was mainly due to the cleansing during the pickling and washing. He has since found that the washing of grain in plenty of water floats off the impurities, and light imperfect grains, and is just as effective as the former pickling....The editor recommends soaking the grain in a solution of Glauber's salt (sulphate of soda), which can be purchased cheaply. The grain is afterwards dried off with dry lime.....M. Leluz, of France, advises to soak wheat seed in a brine, made by dissolving at the rate of one pound of Glauber's salts to a gallon of hot water. A gallon of this is poured over each sack of wheat seed and about 2 lbs. of fresh slaked lime thoroughly mixed in to dry it off. The action of the salt and the lime is to destroy the smut and other fungi, while both together form an efficient fertilizer. We commend this method for preparing Spring wheat seed, and also for Winter wheat. The Glauber's salt (sulphate of soda) is very cheap, and can be bought in small quantities for a few cents per pound. It is sold in New-York, at wholesale for one cent a pound, or even less.

Potatoes—Small or Large, Whole or Cut.

"Big, and the but end, by all means," says one. "Cut potatoes, if you want to economize," says another. "It is of no consequence," says a third. "They will rot any way," says a fourth.

There is a great variety of practice which shows that this very useful vegetable will bear more abuse than almost any other crop grown upon the farm. The writer has tried almost all methods and has settled down upon whole potatoes, an inch to an inch and a half in diameter, as, on the whole, the most desirable for seed, taking into account the immediate crop and the future welfare of the tubers. If we look merely at the immediate crop, we can doubtless get more from a given amount of seed to cut them into single eyes, than to plant them whole. But we have very strong suspicion that this cutting weakens the stamina of the plant, and if followed up with any variety for a long series of years would run it out. We ought to follow such a method, if we can discover it, as will keep the plants in the highest health, and make the crop sure and remunerative.

We have grown good potatoes from the smallest seed, a half inch or less in diameter, but it was only upon very rich soil and with extra care. The objections to using large potatoes whole, are the extra expense for seed, as it requires from twelve to fifteen bushels to the acre, and the over stocking of every hill tending to produce a great many small potatoes. The medium size removes these objections, furnishes just about seed enough, stocks the hills sufficiently, and preserves the health of the plant. This practice we have followed for several years and on the whole, it gives the best results.

If we admit the theory to be correct on which the practice is founded, it would not follow that it would in every case preserve the crop from disease. Almost every variety has been subject to cutting and to disease for many years, and no one can be perfectly sure that he plants a sound healthy tuber if the size is every thing desirable. If the constitution has been weakened in any way it is much more likely to be injured by the hot, wet weather of August, than a strong plant would be. The universal prevalence of the rot is probably owing quite as much to the treatment of seed, as to soil and climatic influences.

Hints on Tobacco Culture.—No. I.

STARTING THE PLANTS.

Without stopping to discuss the moral question of tobacco using, we will only treat of its agricultural bearings, and here is a wide field. Exhausted acres once most fertile, impoverished farms and plantations which a few years ago teamed with luxuriant growth, whole counties and sections of States ruined as to present prosperity, testify sadly to the results of the wrong culture of this poisonous plant. This is a matter of history and fact. We hold that these results need not have been, and need not be.

Tobacco, properly cultivated, offers the farmer a very quick way of turning manure into money. The temptation is to turn also the fertility of the *soil* into money, and thus exhaust it. Few crops will bear to grow upon the same land year after year; with manure enough, tobacco may be thus raised, and as this saves labor, it furnishes powerful temptation to labor-sparing farmers. *It never ought to be cultivated except in a regular rotation.* As a cleaning crop it is valuable, for it will neither endure weeds, nor will they grow in its shade. It requires high manuring, thorough tillage, and freedom from water in the soil—so that soil on which good tobacco has been raised, is easily prepared for almost any other crop.

THE BEST SOIL is a good deep loam, and the best situation one not exposed to early Autumn frosts; first-rate corn land is good tobacco land. If broken up from sward, this should be done the Autumn previous, though by plowing early and repeatedly before the time of setting out the plants, the land may be well subdued, even if taken up in the Spring. There should be an application of manure equivalent to 40 or 50 two-horse loads to the acre—the coarser half of which should be turned under 7 to 9 inches deep, and the rest afterwards be placed on the surface, and plowed or otherwise worked in.

THE SEED BED must be prepared and sowed by the middle of April, in the warmest and best place on the farm—allowing about a square rod for each acre intended for tobacco. This bed should be deeply spaded, richly manured, and it is an excellent plan to lay on a mass of brush and dry litter and burn it, before smoothing and raking over the bed. This destroys weed seeds, adds fertility in the ashes, a dark color in the charcoal, and makes a most friendly preparation for the fine seeds. The seeds may be sprouted before sowing, by mixing them with fine earth, moistening, and setting a few days in a warm place. This is advisable only in late sowing. Use a large thimbleful of seed to the rod, if you are sure of your seed. It is always best to prove the seed by previously sowing a little in a pot

placed in a hot-bed or under a glass in the house, and kept warm. Thoroughly mix it with half a pint of fine soil before sowing; sow the seed, and then roll the bed with a hand roller, or spat it down evenly with a shovel. The bed must be shielded against frost and beating rains by covering it with boards or cloths, (hay caps are good). When the young plants appear, occasional waterings with *dilute* liquid manure promote a more vigorous growth. They must be thinned out where crowded, and scrupulously weeded. They will grow unevenly and slowly; and the largest will be ready to transplant to the field about the tenth of June, in latitude 41°—earlier at the South, and five to ten days later, if further North, at this time they may be transplanted 2½ to 3 feet apart in rows 3 feet apart. The period of transplanting continues, according to the weather, for some days, or even weeks. The young plants root easily, and grow rapidly, particularly if we have warm, moist days and, when well rooted, luxuriate in our hottest Summer weather.

[PRIZE ARTICLE.]

Cultivation of the Oat.

BY S. P. N.*

The Oat is cultivated, perhaps, more widely than any other of our grain crops, having but few enemies, tolerant of great differences of soil and climate, and producing remunerative crops on the poorest soils. Owing to its strong assimilative powers it seems one of the best means for the extraction of fertility from an almost exhausted soil. And although by some, and not a few, it is so used, yet when judiciously introduced into a rotation, it is not so greatly an exhausting crop.

PREPARATION OF THE SOIL.

It is a common custom to sow Oats following corn, although they require a rather heavier, closer soil, the desirable qualities being moistness, and a reasonable compactness; a clayey loam is the best soil, as the plant is impatient of drouth. The ground should be broken as early in the Spring as it can be *well* worked, plowing deeply, Oats being better able to bear the bringing up of a portion of the subsoil than most other crops. The teams at that time are stronger, the ground loose from the effects of the winter frosts, and the absence of sward still further favoring, it seems the most suitable time for the deepening of the soil, an object which should be ever in view with the farmer.

PUTTING IN THE SEED.

As soon as practicable, after plowing, the seed should be sown. For several reasons I give preference to drilling in the seed, for by so doing (1st,) the seed can be more evenly distributed than by hand sowing; (2d,) the covering is more perfect and uniform than either by the harrow or the plow; (3d,) the amount per acre can be more exactly regulated; (4th,) the grain comes up simultaneously, and starting evenly it does not present the spotted appearance of many fields, and (5th,) the grain is much less apt to lodge. I have had, and also frequently seen, drilled oats stand well side by side with badly lodged hand sown grain where no other difference could be assigned than the mode of sowing. I allow the ground to dry sufficiently to bear rolling after plowing, then drill in the grain not more than two inches deep, one inch indeed on my heaviest lands, and then finish with the roller again. Large breadths of oats are well put in by sowing immediately on the fresh plowed lands, harrowing twice, first lengthwise of the furrows, then across, and finishing off by rolling the surface; the last an important matter in laying down a field of this grain. Should the soil be liable to have water stand upon it after a rain, it should be underdrained, or at least, after sowing, water furrows should be opened with plow and shovel for its exit; no grain but rice can be expected to become aquatic in its habits, to accommodate careless farmers. The amount of seed sown varies from two and a half to four bushels per acre, my own heaviest crops have been from three and a half bushels of seed. As a general rule the better and the heavier the soil the more seed it will bear; three bushels is the average and is safe. The earliest sown crop, except in very rare instances, is the best, both in weight and yield, though the eye may not detect the difference.

VARIETIES.

With respect to the kind to be sown there is much difference of opinion, but it seems well established that the *Black Poland Oat*, is one of the best, if not the best variety, weighing sometimes fifty pounds to the bushel. The *Imperial Oat*, is also very heavy, and is preferred in the Northern and Middle States to most other improved varieties. It has a clean bright, plump grain, almost equaling barley in solidity, and it is very prolific. The *White Poland Oat*, first distributed, I believe, through the *Agriculturist* Office, and now widely multiplied, is also a beautiful, prolific, and very heavy grain. The common *White Oats* are the most extensively cultivated in the United States, and are hardy, yielding tolerably well, varying with the season more than most others in weight, a bushel weighing from fifteen to thirty four pounds. Oats are found when long sown on the same farm to deteriorate both in the weight and yield, and great advantage results in obtaining seed from other localities, especially from cooler latitudes. I have twice imported Oats from England, the Potato Oat, and another variety of unknown name. When sowed they weighed 44 pounds to the bushel, but year after year they became lighter until they were abandoned for a black Oat obtained from Prince Edward's Island, N. B., which I have sown for a number of years without any perceptible diminution of weight or produce. Possibly under my present mode of selecting seed the English grain might have been kept up.

SELECTION OF SEED.

I adopt the following mode: taking a marketable article I place in the fan mill, instead of the usual screen, a board three or four inches shorter, and by a rapid turning blow over about one fourth of the grain. The portion which runs down its usual course will thus be the best and plumpest grain, and I find will keep the crop up to the standard weight apparently indefinitely, which is all we can expect in our latitude. I think farmers would find their account in this mode of obtaining most of their seeds. [This is certainly so—"like produces like."—ED.]

HARVESTING.

In harvesting, which is generally done by the reaping machine, care should be taken to guard against cutting too green, for although the straw is better for fodder, the grain, unlike wheat or rye, is not so heavy, as I have found from trial; and the injury from binding too hastily is greater, for the Oats pack more closely in the sheaf, shock, and mow. Owing to this close packing many farmers have abandoned the reaping machine, and returned to the cradle in harvesting Oats, the "gavels" thrown off the machine frequently receiving injury from wet, while the swath of the cradle will dry out after a shower, almost immediately, without even turning. It is the practice among some farmers to draw in their Oats without binding, the gavels being loaded on the wagon, with forks adapted thereto, in the manner of sheaves, buts outward, and then pitched indiscriminately into the mow like hay. If stacked, more care is used, the gavels being placed buts outward, at least on the outer course. But from repeated trials of both plans, I give the preference to binding; the difference in time is not noticeable, and the room required in the mow less; the thrashing, also, is much expedited. In the field they may be protected for some weeks, if necessary, by a mode of miniature stacking, as follows: I place from fifty to one hundred sheaves in a shock, commencing in the center, by laying four sheaves in the form of a cross, the heads together and over-lapping considerably, and in the angles others, for a center; then a ring with the buts out, the tops a little further in than the bands of the center sheaves, and build up to a point, capping with a large sheaf, buts upward and the tops spread evenly on all sides to shed the rain around the shock. It is well, however, to get all grain under cover as soon as practicable. [That is, as soon as there is no danger of heating in the mow.—ED.]

THRASHING AND MARKETING.

The thrashing is now almost entirely performed by horse power, machines being used and taking the place of the flail and of the old mode of treading out on the barn floor by horses. I find it most expeditious in cleaning up from the chaff to perform the operation twice; first with a large-meshed riddle or screen, and then with a finer one of say four meshes to the inch. A nice clean sample of grain is always of readier sale and will command a better price than the same article mixed with dirt and trash, buying grain being a science as well understood as selling it, and farmers can find little profit in paying freight and commissions on dirt in grain. The best market for Oats is probably New-York, if the producer is not so far off as to consume his profits in freights. The large grain dealers there, if applied to, will furnish bags to the grower at a small percentage, and sell the grain on moderate commission, often doing better for the farmer than he could for himself in that great Babel. There the Black Oat is preferred; in Philadelphia it is almost unknown, the white sorts taking its place.

GENERAL REMARKS, ROTATION, ETC.

On soils equally fertile, oats are uniformly heavier and more prolific in the cool latitudes and in moist seasons. They are esteemed, though I think unjustly, an exhaustive crop. Their place in the rotation in this latitude, is usually after corn; the Oat stubble is then plowed up for wheat, thus injudiciously, as it seems to me, bringing two straw crops close together. This course I have abandoned, and introduced clover between the two; sowing it thickly with the Oats, pasturing it the next summer, and plowing that sod up for wheat; the results are eminently satisfactory. [The rotation would then be (1,) corn on sward ground with manure; (2,) oats without manure, seeding down to clover; (3,) pasture; (4,) clover turned under and wheat sowed, seeding down to grass; (5,) wheat taken off and grass remaining; (6,7,8,) grass mowed two or three years—perhaps receiving top-dressing the second year—then wheat.—ED.] Oats are benefitted by almost any of the usual fertilizers. Lime applied immediately to the crop, has the effect of retarding its ripening, and is thereby often of questionable benefit, exposing the plant for a longer time to the accidents of the season, and also to insects. Ashes have rather the contrary effect, and seem to be peculiarly efficacious in increasing the yield. Nitrogenous manures, such as Peruvian guano, are apt to cause luxuriant growth and consequent lodging if applied too freely. The best mode of manuring the Oat crop, is through the preceding crop, getting the land in good heart, and not by specially stimulating the growing plant. On sod they rarely do as well as the quality of the soil would lead one to expect. The chief enemies of the Oat are: rust, the army worm, and the aphis. The army worm, if he comes, has it all his own way, though a deep furrow plowed round the field, the furrow slice thrown towards the fence, and pits dug at intervals, into which the worms fall, has proved measurably successful, many bucketsful of worms having been thus taken by single farmers. The aphis is a plant louse of a reddish color, that attacks the upper part of the stalk and the stems of the head, and sucks the juices, causing shriveling of the kernel, though the husk seems of full size. Very extensive damage was done to the crop by this insect during the past Summer. Rust has been extensively damaging in some seasons, particularly in the West. I believe no remedy is known. The above is the result of 15 years experience in farming, during the last 10 of which, Oat growing has been rather a specialty.

* The name and address of this writer (whose letter is post-marked New-Jersey) can not be found; will he please notify us that he may receive his prize.—ED.

THE VILLAGE BLACKSMITH .... FROM A PAINTING BY R. ELMORE, R. A.

Engraved for the American Agriculturist.

Man with the rugged sinews, man with the face of soot!
Come forge for us a horseshoe, fit for Eclipse's foot!

The principal figure in the beautiful picture which our artist furnishes for this number of the *Agriculturist*, is a very important personage to those who have horses to be shod. "No foot, no horse!" is a good old proverb, and the preservation of good feet, or the improvement of bad ones, largely depends upon the skill and care of the Village Blacksmith. Those who cluster round his forge these raw nights, to gossip over the latest news of the war, may not think it, but the part the Blacksmith operates upon is a complex and cunning structure, admirably adapted for its work, but liable to derangement and disease if neglected or improperly treated. As sure as the sparks fly upward, your horse, though he be worth five hundred dollars now, shall be lame, if he is long shod by an incompetent or careless Village Blacksmith. The latter is sometimes ignorant of the principles which should guide him, and too often despises their application when informed of them. He will rasp and pare and hammer as if the foot were a mass of insensible horn, whereas it is a complicated elastic spring, with a cushion attached, to receive easily the weight of the horse. If this were not so, fancy the shock which every stroke of Mr. Bonner's marvellous fast trotting mares must give to the joints of the frame above. Instead of preserving this elasticity with the greatest care, the workmanship of our Village Blacksmith is too often calculated to impair and destroy it. Hence inflammation of the interior tissues, navicular disease, and the incurable lameness consequent upon it. If you do not know about the navicular bone, the *hinge* which holds the coffin and coronet bones together, we have not space here to describe its functions. See to it that your Village Blacksmith does not bind your horse's heels to the rigid iron shoe so that they cannot expand when his weight comes upon the foot; for if he does, a contracted hoof and navicular lameless will follow. Sometimes there is hereditary predisposition to this. The stock of American Star need care in this matter. The famous English mare Cobweb inherited it from her sire, and though her own feet were very fine, she communicated it to her great son, Bay Middleton. He was a magnificent cripple at six years old, though he had been sold for $25,000. All the veterinary skill of England could not save him from incurable lameness.

The Village Blacksmith commonly has an ideal as to what shape a horse's foot should be, and he will twist and rasp the hoof to conform to it, if you will let him. Do not permit it, for the foot shod should be like the foot unshod, minus the iron which is to protect, not wrench and cramp it. They say that the devices of mantua-makers cause consumption and dyspepsia among fine ladies, and the Village Blacksmith will sometimes be guilty of corns, of pumiced sole, or of navicularthritis, if not watched. He must be induced to regard his business as a progressive science, not as a mechanical operation which can not be improved. Insist upon it that he give the crust of the hoof at the heels a fair bearing upon the shoe. Limit him to five nails in the fore shoes, and seven behind, those on the inside to be well forward towards the toe. He will predict the loss of much iron, but regard him not. These nails are sufficient to keep the shoe on, and the inside quarter of the hoof being free, the heels expand naturally when the foot comes down in work. Our stalwart friend of the leather apron, too, may want to pare down the frog. Stop him! for if you do not, you will find, too late, that his knife has entered into your soul. This frog is the cushion, nature's own buffer and fender, between the foot and the solid ground. Then, hearing you speak in favor of open heels, some Village Blacksmiths will cut away the sides of the bars. This will make the heels *look* open, but it is just like the application of cosmetics to the skin. Temporary looks are obtained at the expense of permanent injury. Forbid peremptorily the burning of your horse's foot with a red hot shoe to make it fit. It will render the hoof hard and brittle, liable to sand cracks, and so will too many nail holes. The shoe moderately hot may be held to the sole to mark the places to be pared—the knife must do the rest. Usually the Village Blacksmith is a man of worth and probity, and though a little opinionated sometimes, address on your part will induce him to follow the instructions of science, and take more care in the shoeing of your horse.

For the American Agriculturist.

Hints on Cabbage Growing.

A failure of this crop is common from the disease called "anbury," or "fingers and toes;" the roots swell, and after a time rot off; new roots are often sent out which keep the plant alive, and give hopes of success. But the disease soon reaches the new roots, and after a hard struggle the plant dies, or starts too late to make a good head. Fortunately, this most destructive disease generally shows itself by the time plants are large enough to set, and where the roots show the least tendency to swelling, the plants should be rejected at once. The grand remedy of the cabbage growers who supply our large vegetable markets is, never to plant the same piece of ground with this crop two years in succession. The cabbage is more sensitive than most other plants, to feeding upon its own decay. For this reason, unusual care should be taken in preparing hot-beds for starting plants, during this month. If the same soil have been used for starting plants the year before, it will be very likely to impart the disease to the young plants. Very much depends upon the preparation of the seed bed, whether it be under glass or not. For late plants it is well enough to plant the seed in the hills, but for the early crop, it is indispensable to have either cold-frame plants, kept through the Winter, or those started as early as March, in a gentle hot-bed. Whatever the amount of manure used, there should be at least six inches of fresh soil upon the top. Leaf mold from the woods, mixed with sand or with yellow loam, makes a good seed bed in which to start the plants. The writer has always succeeded better with cabbage upon green sward broken up the previous Fall, than upon any other ground. In such a soil, we may use almost any quantity of stable manure with decided advantage to the plants. Hog manure is always to be avoided. I have never yet succeeded in composting it with so much muck as to make it entirely safe for this crop. Ashes are excellent, both as a manure and as a safeguard against insects. They should be used in the seed bed, and around the plants, soon after transplanting. JONATHAN.

A Dish of Green Peas.

This is one of the earliest garden crops that can be put into the ground. For the first crop, select the dryest and warmest corner of the garden, sheltered by a wall or a high and tight fence if possible, and open full to the south. The ground should not be manured the same year it is planted to peas, or the vines will grow too rampant, and bear few pods. It should, however, have been enriched the previous year. Some of the old school will tell you not to sow peas in the "new of the moon," lest the vines all run to stalks, and not to fruit. But let the moon alone, and sow the peas as soon as the season opens. The frost being well out of the ground, break it up by spading, and rake it down level and fine. With a garden line, lay off the drills as long as you like, and at least two inches deep. A good method is to make two drills six inches apart, then to leave a space two and a half feet wide, or more, for tall growing kinds, for a walk between them; then the next pair of drills, and so on. The peas are scattered in the drills about an inch apart, and then covered with the back of a rake. One row of brush is stuck for two rows of vines. For this purpose, the best material is brush from the woods, especially the fine bushy limbs of birch trees. Yet the spray of almost any tree will answer; and the bushes should be from three to six feet high, according to the kind of pea. Another method, often practiced where brush is scarce, is to drive in stout wooden stakes, six feet apart, along each row, then pass a line of strong twine from end to end of the rows, taking a turn around each stake as you proceed. Begin when the vines are about six inches high; put on a second line when they are two feet high; the tall varieties will want a third string. Do not put down the brush at the time of sowing. Let the plants get several inches high, give them two or three hoeings and thorough weedings meanwhile, the last time drawing up the soil around the stems to prevent them from being blown about by the winds: then bush them. To get a very early crop, sow the peas under the lea of a sunny wall, in drills running east and west, and have a frame of boards, shaped like an eaves-trough, to set over each row in frosty nights and during cold rains. Set it up on the edge by day to reflect the light and heat of the sun on the young plants. Of the many varieties now in market, we can not speak at length. *Early Kent* and *Daniel O'Rourke* seem, just now, to dispute the field as to *earliness*. Both of them and the *Prince Albert* are early, and fair quality peas. For a little later crop, the *Champion of England* ranks high: it is very sweet, rich and high flavored. The *Marrowfats*, of course, will always be in vogue.

A Spring Tart—Rhubarb.

Does anybody doubt, or not know the desirableness of this vegetable? Then we pity him. It is one of the finest things in the world, to make a pie or Spring tart. Apples often give out in April and May, and those which remain are wilted and tasteless. Man's stomach longs for something fresh, crisp and juicy: the pie-plant affords that very thing. It forms a connecting link in the year-long chain of articles for pie-making. Think, too, of the doctors' testimony that it is "one of the most wholesome, cooling and delicious substances that can be used for the table. For dysentery in children, it is an infallible remedy, stewed, seasoned with sugar, and eaten in any quantity with bread." We have tasted samples of fair wine made from this plant. It is also used for jellies and jams.

Mode of Culture.—Procure a few crowns, with roots attached, and set out only one in a place. Rhubarb will live in any kind of soil, but to get large, succulent stalks, the soil must be deep and rich. Five or six plants are enough for an ordinary family. Lay off a bed twenty feet long by four wide. Remove the top soil, break up and manure the subsoil heavily, and then return the top spit to its place. This last should be enriched with a light dressing of old manure, and if the land is a stiff clay a little sand should be worked in. Now set out the crowns by a line, four feet asunder, leaving the plump, pinkish buds an inch or two below the surface. This work may be done in the Fall, or early in Spring. New roots will soon form, and the growth will rejoice the eyes of the planter.

The after culture is very simple. Keep the ground free from weeds. Pluck no leaves the first year. In the Fall, put a peck or more of coarse manure around each plant. This will protect the roots, and furnish nutriment for the next year's growth. In the second Summer, the leaves may be plucked in moderation, and after that, quite freely. Let the plants, however, have their autumnal dressing, to be forked into the soil the following Spring. In our own grounds, we have pursued this course several years; and now the stalks and leaves of our plants are so magnificent, we are often asked the names of our new and improved varieties. We uniformly reply by simply pointing to the manure-heap.

Forcing.—If any one wants to get a very early tart or pie, let him (say, by the middle of this month,) set a barrel or rough box, headless and bottomless, over the crowns of several early plants, and surround the same with fresh manure from the horse stable. Put a few forkfuls inside of the barrel, and a bushel or more outside. This will soon generate a local climate of 50° or 60°, and give the plants a start while those out of doors are asleep. The barrels should be kept nearly or quite covered for ten days, and then gradually opened as the season and the plants progress. Add a little fresh manure outside, after the first week. As soon as the out-door plants are fit to cut, the forced ones should be uncovered and allowed to rest.

Varieties.—Good cultivation will improve the commonest varieties, yet there is a choice in sorts. Here are some of the best now known:

Myatt's Linnæus.—This, probably the cap-sheaf, has the least acidity of any known sort, and therefore is very desirable in these times, when sugar is so costly. It is very tender, needs no peeling when cooked; is also highly aromatic.

Myatt's Victoria.—Early, not very sour, productive, color dark red.

Tobolsk.—Stalks small, but of fine flavor, very early, good for forcing.

Giant.—Stalks round, green, very large, often four feet long, and as thick as a man's wrist.

Downing's Colossal.—Truly magnificent. Stalks very long and large, tender, high-flavored.

(PRIZE ARTICLE.)

Family Vegetable Garden.

BY P. C. REYNOLDS, ESSEX CO., N. J.

The garden is a *domestic institution* that has been too much neglected in this country, greatly to the detriment of the health and enjoyment of our people.

THE GARDEN SPOT should have a gentle descent toward the south, most writers say southeast, but there are grave objections to an easterly exposure. If after a very cold night in Winter the first rays of the morning sun fall directly upon the frozen plants, they are liable to be injured by the sudden thawing, while if more gradually thawed by the air before the rays of the sun strike them, they may escape. So in Spring, tender vegetables might survive a slight frost if not exposed to the direct rays of the morning sun. A garden should be protected from the northerly winds by hills or woods, or in the absence of these by a high, tight board fence or wall, and thus situated and protected will be several days earlier.

SOIL.—The best soil for a garden is a sandy loam, having but just enough sand to prevent its packing down hard, or baking after heavy rains, free from stones large enough to hinder the cultivation of the most tender plants, and containing enough vegetable mold to give it a dark color, as such a soil absorbs the heat of the sun more than a light colored one, and is warmer. Depth of soil is requisite to successful gardening, especially to the production of good root crops. The subsoil should be porous enough to permit the water to pass through it readily, but not so open as to allow the fertility of the surface-soil to leach through it. A subsoil of coarse sand or gravel would be liable to leach, while a porous loam, containing clay, would allow the passage of water, but retain the pabulum of plants. If the subsoil of a garden is so compact as to retain the water which falls upon it until it is evaporated, it will be a cold, sour garden spot. To ascertain whether it is too compact or not, take a shovel, (not

spade) and if you can dig a post-hole three feet deep without difficulty, it will answer, otherwise it should be subsoiled or trenched. The former method is the more expeditious for a large pit, the latter the more effectual.

SUBSOILING AND TRENCHING.—Subsoiling is performed by following in the surface furrow with a subsoiler, which merely raises the subsoil two or three inches, thus loosening without inverting it. It acts upon the subsoil somewhat as the mole does upon the surface. The furrow should be turned deep and *narrow*, so that the subsoiler—which is quite narrow—can break it all up. A garden should be made friable to the depth of at least two feet. But the gardener who means to do up his work thoroughly, even though it require a little more labor and expense at first, will trench his ground.

Trenching may be performed as follows: take a good strong spade, draw your line upon one side of your ground, and open a trench two spades wide, throwing out the entire *soil*, then press your spade its full length into the subsoil, raise the dirt a little, and let it fall back into its bed. Open another trench the same width, throwing the top soil on to the first trench. Loosen the subsoil as before, and so proceed until the ground is all trenched. To fill the last trench, take up the soil thrown out of the first in a wagon or wheelbarrow, and move it around to fill the last. An active hand would soon trench a large garden in this way, and it would not be necessary to repeat the operation in several years. A great deal of subsequent labor will be saved, and much more satisfactory results attained, by the proper preparation, and fertilization of the garden plot.

MANURING.—I would prepare my garden plot in the Fall, and after subsoiling or trenching the ground, would draw on well rotted barn-yard manure—a mixture of the dung of all the domestic animals—at the rate of about twenty five two-horse loads to the acre, and plow it in to the depth of about six inches. I would then draw on about half as much more, spread it over the surface, allowing it to remain upon the top until Spring, when I would turn it in and thoroughly mix all the manure with the soil by several plowings. If the soil had been much exhausted, I would apply fifty two-horse loads to the acre. The garden should receive a moderate dressing of manure every Fall. [Certain parts of the garden we prefer not to have manured every year.—ED.]

IMPLEMENTS.—The first thing needed to properly lay out the garden, walks, beds, and rows, is the *Reel and Line*. The reel should be of iron, and the line of hemp, at least six rods in length, and ¼ of an inch in diameter. A spade and a shovel will be required in many of the operations, and to still better pulverize the soil for beds, and to add more manure to special crops, no implement is superior to the *digging fork*. To draw drills for sowing seeds at uniform distances, and in straight lines, some two or three *drill markers* are convenient. One should have the teeth about 11 inches apart, another should have them 15 inches; by taking out the alternate teeth it would answer to make drills 30 inches apart. Another should have the teeth 18 inches apart, so as to make drills of 18 inches and three feet distance. Each marker should contain about five teeth, and should be made of hard wood. The steel-tooth rake is very necessary to finely pulverize and level the surface of beds, and free them of stones, lumps, and rubbish. A *hand roller* is useful to smooth and compact the surface after the seeds are sown. This should be of hard wood or cast iron, and may often be used to advantage in crushing the lumps before sowing. The *garden trowel* is used in transplanting, where it is desirable to remove a lump of earth with the roots. A good *steel hoe* of the very best material and make, and the *Dutch* or *Shuffle-hoe*, are indispensable articles in the garden. The latter will greatly facilitate the labor of cutting up weeds between the rows. The *garden watering-pot* should be of the best tin, strongly made, and capable of holding twelve to fourteen quarts. The *rose* or *sprinkler* should be perforated full of very fine holes, so as not to beat down weak plants. A *wheelbarrow* with a wide wheel, and side-boards that may be very readily removed, is an important accessory of the garden. [We like the common, cheap railroad barrow very much, and besides would add to these necessary implements the *weeding fork* which becomes indispensable to whoever once uses it.—ED.]

THE HOT-BED.—To raise early vegetables, it is necessary to bring forward some varieties in a hot-bed. The aim is to afford artificial heat to plants before the ground is thawed or warmed up in the Spring. This is done by the fermentation of manure beneath them, while they receive the light and heat of the sun, the cold being excluded by the frame and glass. Dig a pit running east and west, 18 inches deep, 5 feet wide, and 12 feet long. Make a frame of inch-and-a-half stuff, spruce or pine, to fit within the pit, and about 2 feet above the ground on the north or rear side, and one foot in the front, and make all tight by battening. The sash should be of clear pine, 6 feet in length, and wide enough to contain three rows of 7 by 9 glass. The sides, ends, and middle pieces of the sash should be strong enough to prevent springing apart in the middle and thus allowing the lights to drop out. The glass should lap about ¼ inch, and be well puttied. The bed should be started about the first of March. Use horse manure, pretty full of litter, and slightly fermented. Fork it over several times, to break up the lumps, and mix the coarser and finer manure well together. Make the bed regular and level, beating it down with the back of the fork, leaving the manure about 20 inches deep. Put on the glass and wait two or three days until the manure has commenced heating, then spread the loam evenly over the surface, 4 or 5 inches deep. It should have been procured the Fall previous, sifted through a fine sieve, [3 holes to the inch—9 to the square inch.—ED.] and covered with straw so as to be ready for use before the ground is thawed. After putting on the loam, wait until it is warmed through before sowing the seeds. Nail narrow strips of boards on the inside of the front and back, just above the loam, to support a plank to sustain the gardener while sowing and weeding. The hot-bed needs close attention until the plants are all transplanted into the open grounds. In cold freezing weather it will need covering with mats or straw; in warm sunny days it will want airing; at all times it will require frequent waterings with tepid water. Always water at the close of the day, otherwise too much of the water will evaporate.

Cabbage, cauliflower, egg-plants, lettuce, peppers, and tomatoes may be sown quite thickly in the rows, which should be 3 inches apart; when the plants are 2 inches in hight, they should be thinned to 3 inches in the row. To forward cucumbers to be transplanted, cut sods 6 inches square and 4 inches thick, and place them in the bed in an inverted position directly upon the manure. Set a small stick in the center of each sod to guide you in transplanting, and sow upon each sod about a dozen seeds, but not within one inch of the edge. Spread fine loam evenly over the seeds about ¾ of an inch in thickness, and press it down gently. After the plants have put out their first *rough* leaves, thin to four in a sod, keep well watered, and transplant when cold weather is past—say middle of May in latitude of New-York City. Too great heat, like the crowding of the plants, has the tendency to draw up the plants and make them spindling and weak; hence always have good ventilation when it is warm.

LAYING OUT THE GARDEN.—If the garden is to be for vegetables *exclusively*—with another plot devoted to fruits—I would leave a border about four feet wide around the plot next to the fence, and inside of this I would have a good broad, permanent walk, and another broad walk running lengthwise through the middle of the garden. I would lay off the portion to be devoted to beds in plots about two rods wide—a convenient length for the rows—and separate them by narrow, temporary paths. In making walks, do not sink them below the surface of the beds, as they would be disagreeable promenades after a rain, but rather raise them in the center. Select a plot in the warmest part of the garden for those perennial plants that are not to be disturbed yearly by the plow—such as asparagus, rhubarb, etc., etc. Biennial plants will also find a genial place in the sheltered border.

ASPARAGUS.—The *Giant* is the standard sort. Sow the seed very early in Spring, in drills 1½ inches deep, and 15 inches apart; cover and roll. When well started thin to 3 inches apart. Run the shuffle-hoe frequently between the rows, and weed by hand often. In soil prepared and manured as previously directed, the roots will be large enough to transplant when one year old. Early in the Spring, measure off 24 feet in one of the 2 rod wide plots, and dig in a coat of manure, and about 60 pounds of salt. Lay it off in four beds, four feet wide, separated by paths two feet in width. Mark out with your line two rows in each bed, leaving two feet between the rows, and cut trenches six inches deep, one spade wide. Carefully take up the roots, set them in the trenches 15 inches apart, and cover them so that the crowns shall be 4 inches below the surface of the beds. Keep the bed free from weeds, and early in November cut down the stems, rake them off, and cover the beds about 3 inches deep with stable manure. In the following Spring dig in the manure as deep as you can without disturbing the roots, and repeat the operations of the previous year. As the asparagus comes up this third season, cut a portion of the larger and more tender stalks for the table, when they are from 6 to 10 inches high. In the latitude of New-York City asparagus can be enjoyed from about the 20th of April until the middle of June. Market gardeners cut off the stalks three or four inches below the earth, but the blanched part is rejected in eating.

BEANS.—*Dwarf or Snap.*—Desirable standard varieties are: Early Valentine, Yellow Six Weeks, Mohawk, Royal Dwarf, or White Kidney, and Early Marrowfat. About the 20th of April, sow the first three in the list, and about every two weeks thereafter until middle of June. The last two may be sown from first to middle of June for Fall and Winter use. Plant in drills two inches deep and 18 inches apart. To keep down the weeds use the shuffle-hoe freely, and draw a little dirt around the plants once or twice with the common hoe.

POLE OR RUNNING BEANS.—The desirable sorts are: Large White Lima, Dutch Case Knife, White Cranberry, Scarlet Runners. Plant in hills three feet apart both ways, set poles about 8 feet long firmly in the ground, plant from 4 to 6 beans in a hill early in May and cover about two inches deep. When the vines have run about six feet high, pinch off the ends to promote ripening of beans. Keep soil mellow and clean, draw a little dirt around the plants two or three times during the season.

BEETS.—Desirable sorts are: for the table, Extra Early Turnip (or Early Bassano,) Early Blood Turnip, Long Blood. They require a deep, rich soil. Sow in drills one inch deep, rows eighteen inches apart, and thin out to six inches. Stir the soil frequently, and occasionally pretty deep. Sow the turnip-rooted varieties as early as possible, and the long blood for Fall and Winter use, the latter part of Spring. They may be preserved through the Winter packed in barrels or boxes with dry sand or soil.

BROCCOLI.—The standard sorts are: Early White, Early Purple, Early Walcheren, Early Purple Cape, of which the last is the most desirable. Sow first of April, in shallow drills eleven inches apart. Transplant in June and July, two feet each way. Cultivate like cabbages and commence using in October. BRUSSELS SPROUTS.—Treat every way like the foregoing. Not good until touched by frost, after which they make good greens.

CABBAGE.—Desirable sorts are: Early York, Winningstadt, Large Early York, Early Ox Heart, Early Dutch, Large Flat Dutch, Green Globe Savoy, and Red Dutch for pickling. If very early cabbages are desired, the Early York may be sown *early in September* in drills three inches apart, rows six feet long. Keep them weeded clean, and just before the ground freezes up, thin them to three inches apart in the row, and surround the bed with a frame six inches high in front and about fifteen inches in the rear so as to carry off the water. Cover over with boards, and in mild weather remove the boards in the middle of the day to air the plants. In very cold weather cover with straw, (or straw mats) being careful to remove the covering as it moderates. So soon as all danger of *hard* freezing is past, transplant into the open ground in rows eighteen inches both ways. They may also be much forwarded by sowing in hot-beds early in March. Keep up a pretty high temperature, water lightly, but often: air in the middle of sunny days. They will be ready to plant out soon after the middle of April, and fit for the table by the latter end of June, some two to three weeks later than those wintered over. Sow the later sorts the latter part of April, in a rich bed, rows eleven inches apart, and thin to three inches. Keep them clean; stir often with shuffle-hoe, and they will be strong plants before the middle of June. Select the larger ones to transplant first, and the smaller ones will come in for the Winter supply. Transplant in rows, two and a half feet each way, and stir the ground about once a week until the cabbages head. Do not hill up around the cabbage, but keep the ground level and stir often, and they will not be much affected by severest drouths. A few hours before commencing operations, thoroughly saturate the seed-bed with water, so that the ground is soaked as deep as the roots extend. The plants may each be taken up with a garden trowel, and a ball of earth three inches across the top, removed with them. If set in holes corresponding, and the earth pressed firmly around the balls, the plants will not be much checked by the removal. When practicable, a cloudy day should be selected for transplanting. When it is not convenient to remove a ball of earth with the plants, they should be "dibbled" in with the *finger*, and the soil pressed close around the roots.

WINTERING CABBAGE.—A few may be kept in the house-cellar, but the better way is to build a tight cellar under the barn, or carriage-house for storing the greater share of the vegetables, whether for family use, or stock feeding. In the absence of a barn cellar, a permanent out-door pit may be cheaply constructed by digging a pit in a dry place, twenty feet long, five wide, and two deep. Throw the dirt a little back from the edge, set posts about eight feet long, two feet in the ground, in the middle of each end, and also in the center of the pit. Lay a good stiff ridge pole on the top of the posts, and pin it fast. Take slabs long enough to reach from edge of pit to ridge pole and make a roof. Cover the slabs with about six inches of dirt digging a trench around the outside, and beating the earth roof smooth and hard with back of shovel so that it will shed rain. Make a door in each end of the pit to ventilate it in mild weather. Pull up your cabbages and store them in, heads down two layers deep. You can stow away two hundred large cabbages in a pit of the above dimensions, and take them out whenever desired. In the very coldest weather a few bundles of straw set against the

doors may be necessary to keep out the frost. For Spring use, dig a trench in a dry place, one foot wide, and as many feet in length as you wish to bury cabbages. Lay a couple of rails, or poles along the bottom, place in the cabbage, heads down, and cover with dirt, stems and all. They come out when the ground thaws, fresh and green.

CARROTS.—Desirable kinds: Early Horn, Long Orange, Altringham, Long White. [The first two are best for the table.—ED.] Sow Early Horn, first of April for early crop, and latter part of July for late crop. For main crop, sow in May any of the other sorts, in rows eleven inches apart. Thin to three or four inches in the row and keep a close lookout for weeds. Just before the ground freezes, take a sharp spade or hoe and cut off the tops half an inch above the crowns, and dig with spading fork. Preserve a few for winter use, as recommended for beets, and bury the rest in pits. They are excellent food for horses and milch cows.

CAULIFLOWERS.—Desirable sorts: Large Early London, Large Late London—the former for early use, the latter for late crop. Thorburn's Nonpareil is a good early sort, quite inclined to head, and "Lenormands" is of the same description. The culture is the same as cabbage, taking a little more pains, and you will be repaid with a more delicate luxury. They do not head as certainly as cabbage, but frequent hoeings will promote heading.

CELERY.—The standard sorts are: Early White Solid, Giant White Solid, Red Solid. Sow early in Spring in a rich seed bed. Water frequently and protect from frosts. Thin out plants to three inches. The latter part of July dig trenches one foot deep, and same in width, put in the bottom about three inches of cow or hog manure. Mix it well with soil, and set your plants nine inches apart in the trenches. When the plants are six inches high commence to earth up so as to blanch them. Be careful not to get the dirt into the centers of the plants. Continue to earth up at intervals of two or three weeks, and when the celery has completed its growth, draw up the earth almost to the top of the plants. It may be preserved for Winter use by standing in a box with layers of dry soil between.

CORN (SWEET).—Desirable sorts are: Darling's Early Sugar, Excelsior Sugar, Burr's New Sugar, Stowell's Evergreen. Plant early in May, in rich, mellow soil, three feet each way, stir the ground frequently, and make broad flat hills. [Plant once or twice in May and then about once a week until the fourth of July, to have a succession till frost comes.—ED.]

CUCUMBERS.—Good varieties: Early Short Green, Early White Spine, Green Cluster, and Long Green. For open culture plant early in May in hills four feet each way, slightly elevated. Look out in the early morning for the striped bug, and large squash bug, killing all you find, or you may lose your crop. When they have well the start of the bugs, thin out to four plants in a hill. If they are inclined to run together, pinch off ends of vines. When the cucumbers are of suitable size for use, take them from the vines, leaving none to ripen, as they will continue in bearing longer by such a course. A later planting may be made for pickles.

EGG PLANT.—The varieties are: Long Purple, Large Purple, White and Scarlet Chinese. The first two for use. Sow early in the hot-bed, and when the weather is warm transplant into rows two feet apart, one foot in the row. [In warm soils and locations they will generally fruit, if sown early in the open ground, but earlier started plants are best. ED.]

LETTUCE.—Desirable kinds are: Early Curled Silesian, Ice Drumhead, Butter, Brown Dutch, Victoria Cabbage, White Cos [and Large Indian.—ED.]. For earliest, sow in hot-bed early in March, Curled Silesian, or Butter; transplant early in April into rows eleven inches apart, four inches in rows. For succession, sow in open ground once a month. Frequent hoeings will promote a rapid growth upon which depends its tenderness and goodness.

MELONS—*Musk Melons.*—The desirable sorts are: Fine Nutmeg, Green Citron and Jenny Lind; the latter is earliest, the former two best. About the middle of May lay out the hills four feet each way; with a shovel take out one foot square of soil six inches deep; with a digging fork dig in some horse manure; draw on the soil again so as to elevate the hill some two inches above the level, sow at least a dozen seeds to a hill, and when they have put forth their rough leaves, thin to four plants. To repel striped bug, mix guano and plaster in equal quantities, dust the foliage of the vines while the dew is on with the mixture, and as it becomes washed off and the bugs return, repeat the operation.

WATER MELONS.—The Early Mountain Sprout, Black Spanish, Ice Cream and Orange are all good varieties, ripening about in the order of the list. Give about the same culture as for musk melons, only put the hills six feet apart each way. They like a light sandy soil enriched by manure.

NASTURTIUMS.—There are large and dwarf varieties, the latter more for ornament than for use. Sow in latter part of May or early June, in drills 2½ feet apart, cover an inch deep; thin to eight inches. The tall kind must have brush, poles, rough stone walls, or something else to run on.

OKRA.—Improved Dwarf Green, Long Green. Plant in latter part of May, in drills three feet apart, and thin to one foot. The pods are used for soups while green and tender, or sliced and dried for Winter use. [This makes a most excellent, rich soup, and should be more generally cultivated. ED.]

ONIONS.—Desirable sorts: Large Red, Yellow Dutch, White Portugal, Potato, and Top Onions. The ground should be rich, and free as possible from weeds. Sow early in Spring in drills eleven inches apart. [Several years on the same ground.—ED.] Cover half an inch, and roll down well. Keep down weeds by frequent use of the shuffle-hoe, and hand weeding. For early use, I prefer the Potato Onion to all others. Plant in September, or early Spring, in rows fifteen inches apart, 8 inches in the row. They will be ripe early in July.

PARSNEPS.—Varieties: Guernsey or Cup, Long White. [Add Hollow crowned as best for the table.—ED.] When the ground is fully warm, sow in drills fifteen inches apart, cover lightly, and thin to three inches apart. Before the ground freezes, take up what are desired for Winter use and pack in a box with dry dirt. The rest will keep well in the ground until Spring.

PEAS.—Desirable sorts are: Princesse, Dan'l O'Rourke,* Tom Thumb, Warwick,* Prolific or Strawberry, Champion of England,* Blue Imperial. White Marrowfat.* (Those with a star require bushing.) It is considered quite a desideratum to get green peas as early as possible. Princesse and Daniel O'Rourke are the earliest. Prolific or Strawberry is but little behind them. Sow those which do not require bushing, in rows three feet apart; cover two-and-a-half inches deep. The others want to be four feet. Witch Hazel makes a good durable brush, and should be trimmed up fan-shaped. Peas should be sown as early as possible on a light, dry soil. A little poudrette strown in the drill will hasten their growth. When up, loosen the earth on either side of the row with the shuffle hoe. When a little larger, draw a little dirt to the row, and stir the soil frequently until they are in bloom.

PEPPERS.—Best varieties: Cherry, Large Squash, Long Cayenne, Large Bell. [Bull nose and Sweet Mountain.] Sow in hot-bed early in April, or in open ground a month later. Transplant latter part of May 18 inches each way.

POTATOES.—Desirable sorts: Early Sovereign, Dykeman, Mercer, Peach Blow. Potatoes should be planted in April, to ripen before the heavy Fall rains which increase the chances of rot on rich land. A dry sandy loam, if rich enough, is the best for potatoes. A teaspoonful of ashes on the hill just as they appear above ground is beneficial on most soils. Plant in hills three feet each way and four inches below the level. Stir the surface two or three times, and just before the vines fall over, hoe them for the last time, making low, broad, flat hills. When the tubers are grown enough to crack open when boiled, they will do to commence upon. When the vines are fully dead, dig them with the spading fork, and store them in a dry, cool, dark room, until there is danger of freezing, then remove to a frost proof cellar.

SWEET POTATOES.—Lay the smaller tubers on the manure in a moderate hot-bed, middle of April. Mark out rows three feet apart, scatter horse manure along the marks, cover about six inches with dirt, and early in June break off the sprouts from the tubers and set them out one foot apart.

PUMPKINS.—Standard sorts are: Large Cheese, Connecticut Field, Cashaw. If planted in the garden, they should not be in the vicinity of squashes, melons, or cucumbers, or they will mix. Plant in hills eight feet each way, and cultivate as Melons.

RADISHES.—The best varieties are: Early Frame, Early Long Scarlet, Short Top, Early Scarlet Turnip, Long White Naples, White Turnip, Black Spanish, White Spanish. The first three are desirable for early use, the next two for Summer, and the last two for winter use. Sow as early as possible in Spring on light sandy soil, warmed up by manure, and for a succession once in two weeks through the season.

RHUBARB.—Varieties: Linnæus, Prince Albert, Victoria. Sow in drills, fifteen inches, one inch deep. Transplant in Fall or early Spring three feet each way. Cover lightly with fine manure every Fall. Rhubarb can be forwarded very much in Spring by placing a headless barrel over the hill, and surrounding it with warm manure two feet high. In cutting for use, always leave several stalks in each hill to maintain the vigor of the root. Seed stalks should be cut out as soon as they appear.

SALSAFY OR OYSTER PLANT.—Sow in drills eleven inches apart, half an inch deep, and thin to four inches. Cultivate like the parsnep. Leave in the ground over Winter.

SPINACH.—Varieties: Round Leaved, and Prickly for Winter. For early Spring use, sow in August and September. Scatter a little straw over the leaves and between rows, on approach of Winter. Sow early in Spring for Summer use, in drills fifteen inches apart, half an inch deep, and thin to six inches. When the outer leaves are two or three inches broad, gather for use, leaving the inner ones to continue their growth.

SQUASHES.—The best varieties are: Early Golden Bush, Early Green Striped Bush, Early White Scallop Bush, Summer Crookneck, for Summer; and for Winter, the Hubbard, Winter Crookneck, Boston Marrow, and Polk. The White Leghorn, Mammoth Cuba, and Honolulu, are new and promising, especially the latter. Plant early in May, the bush varieties four feet each way, the others six feet, and cultivate same as cucumbers. Use the Summer kinds before the skin becomes hard.

TOMATOES.—Desirable sorts: Large Smooth Red, Large Yellow, Red Cherry, Yellow Cherry—the latter two for pickling. The Fejee Island Tomato is newly introduced—a large, round, solid tomato, of a pale red color, a little late, and I think, slightly deficient in flavor. It is a great object to grow tomatoes as early as possible, so as to prolong their season. Sow in a warm hot-bed about the middle of March, in rows three inches apart, and thin to three inches in a row. If the plants are inclined to grow too spindling, give them plenty of air. If likely to get too high before the weather will admit of setting them out, transplant them in the same bed. When danger of frost or cold winds is passed, prepare the ground moderately rich, mark out the rows four feet each way. Transplant with care, removing a ball of earth with the roots, and set the plants two inches deeper than they stood in hot-bed. A few plants should be kept in reserve to supply the places of such as may fail, or be destroyed. They should receive frequent hoeings each time, drawing a little dirt around them, forming a broad hill. As the fruit begins to set, pinch off the ends of leading branches so as to hasten the maturing of fruit. Repeat this operation often, or the fruit will become too much shaded. Tomatoes managed as above, will ripen in the latitude of New-York, before the middle of July, on ordinary soils. As they are seldom destroyed by frost before the first of October, the season may extend more than two and-a-half months. Then, if taken when most plenty, and put up in glass bottles from which the air is excluded, they may be enjoyed the year round.

TURNIPS.—Desirable kinds for the table are: Early Dutch, and Red Top Strap Leaf, for early; Yellow Aberdeen, and Rutabaga for late Winter and Spring. For early use, sow as early as possible in Spring. For later, sow Rutabagas in July, and Yellow Aberdeen in August. The rutabagas should be in drills two feet apart, and covered half an inch, the others fifteen inches apart. Slight frosts will not materially injure them, but they should not be exposed to hard freezing.

I believe that I have now enumerated many of the most valuable varieties of vegetables that it is desirable to cultivate in an ordinary Family Vegetable Garden. The gardener should be ever vigilant; should not allow the weeds to get the start of him, nor the insects to destroy his tender vines and plants before he is aware of it. He should do all of his work in a neat, and systematic manner, have his rows and paths straight, and his curves true and regular, and then he will delight to view his garden himself, and have others to visit it. He should keep his tools carefully housed when not in use, and have them cleaned after using, so that they may remain bright and last longer. The very best implements are always cheapest in the end, although the first cost may be greater.

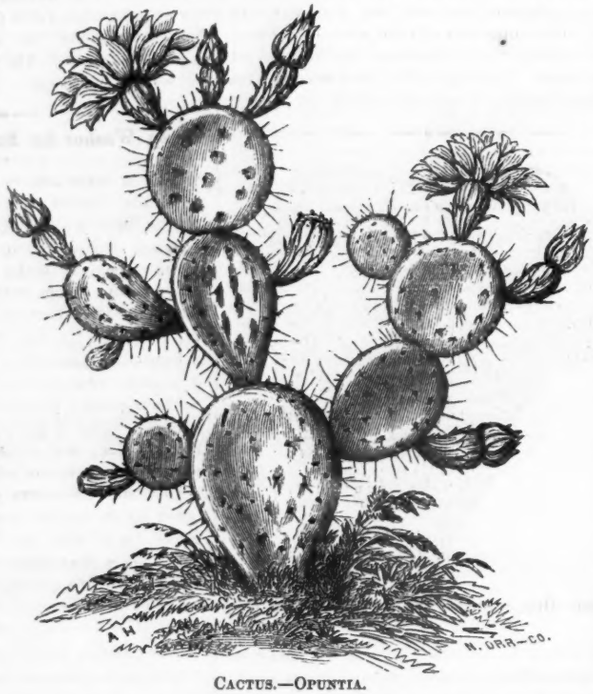
GARDEN SEEDS FOR AN ORDINARY FAMILY.

4 oz. Asparagus.	4. oz. Watermelons.
4 qts. Beans, in variety.	½ oz. Okra.
8 oz. Beets, in variety.	2. oz. Onions.
½ oz. Broccoli.	2 bus. Potato Onions.
½ oz. Brussels Sprouts.	1 oz. Parsneps.
½ oz. Cauliflower.	1 oz. Peppers.
4 oz. Cabbage, in variety.	8 qts. Peas, in variety.
1 oz. Carrots.	1 oz. Pumpkin.
½ oz. Celery.	8 oz. Radish.
2 qts. Sugar Corn, in variety.	½ oz. Salsafy.
2 oz. Cucumbers.	2 oz. Squash.
½ oz. Egg Plant.	8 oz. Spinach.
1 oz. Lettuce, in variety.	2 oz. Tomatoes.
2 oz. Muskmelons.	2 oz. Turnips, in variety

All kinds of seed should be sown quite thickly, as quite a proportion of the best often prove poor, and another portion will be destroyed by insects, while if too many are spared, it will be very easy to pull up the excess.

The Cactus—Good for the House.

This family of succulent plants is remarkable for tenacity of life—so great in some varieties that they retain vitality for years in a hot, dry atmosphere without receiving a particle of moisture except that absorbed from the atmosphere. This tenacity of life is owing to their peculiar structure, which allows them to exhale moisture but very slowly, for they have no proper leaves. We know of no other tribe of plants so peculiarly adapted to growing in rooms, or which repays so abundantly the little care required in the culture. It is to be regretted that so little attention is paid to this beautiful and interesting class of plants, because they are so easily cultivated and are not impatient of occasional neglect. The species and varieties are very numerous, amounting in all to several hundreds. The cactus family is divided into several genera, such as the *Opuntia* (of the general form and growth of which our engraving gives a good representation,) *Mammillaria*, called the ball cactus, having spines clustered around a small tubercle; *Cereus*, having for the most part long pliant shoots; *Epiphyllum* with stems resembling leaves; *Melocactus* resembling melons; *Rhipsalis*, most of the species having flexible stems, like (*rhips*) willow twigs; *Echinocactus* named on account of the prevailing form, from *echinus*, a hedgehog. There are still other divisions of the family, but these are sufficient to show how and why it is divided. There are many beautiful varieties in each of these genera, and all of them are so curious that they are well worthy of cultivation. The cacti are natives of North and South America, as well as nearly all the West India Islands. They are mostly very impatient of frost, the least freezing generally destroying them. There are, however, a few hardy species, of which one of the most common is found very plentifully among the highlands along the Hudson River, and Long Island Sound. It is commonly called the Prickly Pear, and belongs to the genus *Opuntia*. Its flowers are yellow, like most others of this class. Though the cactus will grow in nearly pure sand, it does best on good soil. A good compost is equal parts of rich loam, decomposed cow manure, and white sand. Mix these well together and keep in a dry place, always ready for use. The main points are to allow a period of growth and a period of rest, according as nearly as possible with the nature and habits of the plants. When growing water well, and but little when at rest. For all practical purposes the cacti may be divided into two classes—Winter blooming and Summer blooming. Of course the time of flowering may be somewhat varied by culture, but it is best to follow the natural tendency of the plant. Those who can had better purchase their plants while in bloom, unless they are acquainted with the varieties. As soon as the plants have done flowering take them out of the pots and crumble off half an inch or so of the soil all around the ball adhering to the roots; then put them into pots about one inch larger than those from which they were taken, putting in plenty of pieces of broken bricks or pots in the bottom for drainage. Give them a little water, just enough to settle the soil around the roots and water them not more than once a week thereafter. Place them in a warm situation where they will receive plenty of light and when the plants begin to grow, water them twice a week, or often enough to keep the soil moist but not wet. Syringe the plants to keep the stems clean. In Summer the plants may be set out of doors, placing them on boards or flat stones, and if pure sand surrounds the pots it will be of great service, defending the roots from the direct rays of the sun. Remove the plants to the house before frosts, and give those plants that are not going to bloom only sufficient water to keep them from shriveling. Those that show signs of blooming (a reddish tint seen around their buds) should have a regular supply of water. The necessary temperature of the room is from 60° to 75°, or it may be even warmer, but make no sudden transitions from heat to cold, or the buds will blight. The wants and habits of the plant will be readily learned by observation.



CACTUS.—OPUNTIA.

When cuttings are taken off they should be placed on a shelf in a dry place and left there for one or two weeks before potting them; this causes them to loose part of their watery substance and they root more readily. Put them in soil composed of at least half sand, and give them but very little water until they are rooted.

A Hint to Pear Growers.

Theories and rules are all very well, in their time and place. But just now, we have a *fact* or two for young pear-cultivators. Having noticed that a certain plain and quiet man, year after year brought very handsome pears to the County Exhibition, while many others brought poor fruit or none, we resolved to visit him and see how this thing was done. On asking to see his pear-trees, he smiled, and said he couldn't make much of a show. He led us to a square patch of ground adjoining his vegetable garden, where were just twenty-five trees, all of them on the quince-stock. A few things were visible at a glance. *First*, the wood was healthy and vigorous; the bark was clear of insects, and the foliage a bright green. *Second*, the trees had been well trained from the start. The lower branches shot out at about eighteen inches from the ground, and they were the largest and strongest of all. The other tiers of branches tapered gradually to a point at the top, the whole tree forming a pyramid, like a handsome fir-tree.

Very well, so far. But what means this flooring of straw spread all over the ground? "That's my summer mulch, sir; my soil is rather sandy, and is apt to suffer from drouth in mid-summer; so I cover it with this light, porous blanket. This straw is bright and clean, so it don't bring in vermin nor seeds of weeds; and then, it is so light and open, it does not prevent free circulation of air and moisture about the roots of the trees. I got this idea from Mr. Charles Downing, who is the father of many good ideas."

On a little closer examination, we found that the straw was laid about six inches thick over the entire fruit-garden, paths and all. Our friend said he spread it on in the month of June, just after the ground had received its Spring dressing and cleaning. When once down, it saved the labor of any further hoeing until the middle of September, when it was removed to allow the young wood plenty of time to ripen up hard and bright before Winter. If left on through the Winter, it was quite sure to harbor mice. Just before cold weather set in, our friend was in the habit of winding a thin straw band around the trunks of his trees. He thought this would prevent sudden thawing of the bark after hard freezing. In Autumn, he gave each tree half a bushel of half-rotted manure, spreading it as far as the limbs extended over the ground.

The foregoing was the whole of his secret method of raising regular and handsome crops of pears on the quince stock. The labor of putting down the straw and gathering it up, was much less, he assured us, than the cultivation of the ground would be, if not mulched.

What Grapes shall I Plant?

This is the question which just now occupies the thoughts of fruit-culturists perhaps more than any other. It comes to us from the North and South, the East and West. We can not put it by, if we would; so here is our reply: But our answer, to be intelligent and useful, must depend altogether upon the circumstances of the inquirer, where he lives, and whether he wants to raise grapes for the table, or for wine.

1. If one lives north of latitude 43°, and wishes to dabble in wine-making, we fear he will not make a very marketable article. Southern France, and even southern Ohio will excel him. But the best grapes to try with, are the *Delaware* and *Clinton*. And then, for the dessert, leave out the *Clinton*, and add the following: *Hartford Prolific*, *Concord*, and *Logan*. If one does not live north of lat. 43°, he may, in some seasons, ripen the *Diana* and *Rebecca*, provided he gives them a warm exposure. With the *Isabella* and *Catawba*, it would be useless to meddle. For a select list of four under this head, we would say, plant *Delaware*, *Concord*, *Hartford Prolific*, and *Logan*.

2. If living south of lat. 43°, and above 40°,

the two sorts first named above must still be the wine-grapes. In certain favored localities in this district, the *Catawba* ripens sufficiently well to make a fair sort of wine, but the Summers are hardly long enough to give the clusters all the saccharine and other accompanying elements, needful to make a fair article. Sweetness may be added, it is true, by putting in sugar, but this destroys the purity and delicacy of the flavor, and leaves us only a pleasant (?) kind of cordial. The *Delaware* and *Clinton* ripen well throughout this belt of country, and make very fair wines. For the table, the assortment of grapes is quite extensive, affording, beside those already named, such as the following: *To Kalon*, *Union Village*, *Cuyahoga*, *Allen's Hybrid*, and perhaps others. For a select list of four, we would name: *Delaware*, *Rebecca*, *Diana*, *Isabella*.

3. South of the above, the range of selection widens. There, the *Catawba* yet rules supreme as the leading wine grape; though many of the western vinters are beginning to introduce the *Delaware*, and think that in time it will almost supersede the *Catawba*. A select list of six for the table would include the following: *Delaware*, *Catawba*, *Rebecca*, *Diana*, *Isabella* and *To Kalon*. For some, the *Concord* would be put in this list, on account of its large, showy clusters, its earliness and hardiness, but it is *second* in *quality*.

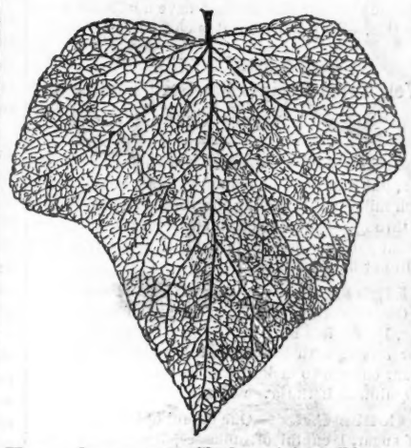
4. In addition to the foregoing, if any one wishes to experiment with some of the newer kinds which promise well, we would advise him to plant the *Crevelling*, *Roger's Hybrid No.* 15, the *Adirondac*, and the *Woodward*. There are other new seedlings soon to be brought out, of which we shall know and speak more at a future time.

The Man and his House in Keeping.

The principle of suggestion has a very wide range. A man's dress and his house are apt to be in keeping with himself; the furniture is, or should be, in keeping with the house, and the garden, grounds, etc., in harmony with the dwelling.

Happening to express some ideas like the above in a mixed company, lately, a little dapper, pinched up man who overheard, began to banter us, and said rather smartly, "Pray sir, what sort of a house do *I* suggest! what sort, ha?" Eyeing him a moment, we said, "You suggest a little, narrow, pinched up, Gothic cottage, made of very thin clapboards, and painted in a very spruce manner." He turned away. "And what sort of a building do you put down for me?" inquired a square, plain, commonsense man. "You suggest a plain, solid, unpretending house, with a white fence all around it, and a row of maple trees in front."

Probably the reader now gets one idea, and we beg him to dwell upon it a little. Whenever a man builds a house, let him not look around and inquire about 'Squire Jones' Grecian mansion with its Corinthian pillars, or Judge Brown's English villa, or Dr. Smith's French chateau. Rather, let him sit down and consider, first, what his own wants and comforts require in a house; and secondly, how much he can allow for ornament, and what will be in keeping with his character, position, and tastes. His house should express himself, should be a sort of natural outgrowth and flower of his mind and character and means, so much so, that people will say, as they pass by: "Well, that's just like him; it's natural—in keeping with the man." And let this appear in the man's furniture, books, dress, and the ordinary surroundings of his dwelling. His trees and fences and walks should show it. Aye, they *will* show the man, whether he will or no.—Who will build us a model farm-house, one which happily expresses the true idea of life in the country and on the farm? Not smart and showy and uncomfortably fine. Not covered with gimcracks, or built in imitation of some fashionable city house. Rather, let it be plain, solid, roomy, with the idea of repose and comfort written all over it, and penetrating it through and through. Give it an air of dignity, earnestness, sincerity, and open-handed hospitality. Give it, above all, a home-like look. Of course, the appendages of barns, woodhouse, sheds, etc., should be in keeping with the main building. The grounds should be ample, neat but not overnice, and the trees for shade should be few and massive, not over-crowded. We see, now and then, some approaches to this sort of building, but the complete expression of our idea is yet to be made. Let our readers look into the vein we have struck; it is worth working out further.



Home Ornaments—Skeletonizing Plants.

This beautiful art is now brought to such extraordinary perfection, as to give one almost an impression of a new creation, not of art but of nature; and it is indeed nature. Our commonest leafy forms, stripped of the green tissue which constitutes their principal substance, are preserved as delicate white skeletons, retaining perfectly the form of the leaf, with its most intricate, reticulated net-work of veins and fibers, and may be grouped or arranged in bouquets according to the dictates of taste or fancy. Thus it not only furnishes amusement and beautiful ornaments, but it is also very instructive to those who take an interest in the hidden beauties of the vegetable kingdom. When a leaf has been reduced to a skeleton, its net-work of nerves and veins is spread out before us, and we are enabled to study the various ramifications of its vascular system. Nature pointed out the way, but man was slow to follow in this instance, as he is in many others, for doubtless the ancients must have observed leaves that had fallen in damp places, and thereby had their cuticle destroyed, leaving only the skeleton. Yet it appears that they were not artificially prepared until 1645, when Marcus Aurelius Severinus published a figure with a description of the skeleton of a leaf of the *Cactus opuntia*. (See preceeding page.) Although Severinus brought this art prominently before the scientific world, we find no mention of it again until it was revived by Ruysch in 1723. This naturalist first prepared the leaves by employing insects to eat away their pulpy parts just as we often see our rose leaves eaten, but he found that the insects did not always stop when they had eaten out the pulp, but often destroyed the solid parts that he wished to preserve, so he had to discard these anatomists and employ a process similar to the one described on page 117, vol. 19, of the *American Agriculturist*. (See also page 70 of this paper.)—Du Hamel prepared the fruit of the pear in the same manner, illustrations of which were given in the Transactions of the Academy of Science of France in 1730.—Francis Nicholls went still further, for after he had reduced the leaf to a skeleton, he split it in halves, dividing every fiber. The specimens of this art on our exhibition table, from Mr. W. F. Heins, we think will excel anything of the kind that has been produced in years past, for in these he not only skeletonized the leaves, but nearly the whole plant, after which they were bleached to snowy whiteness. They are worth seeing.

Cheap Washes for Buildings, Fences, etc.

Take a large tub, or a common barrel, and slack one bushel of good fresh lime, covering the lime with boiling water. After letting it stand three or four hours, pour on cold water enough to make it as thin as ordinary white-wash. Then take one pound of white vitriol and one quart of fine salt, dissolve them, and pour into the lime water. If a *cream color* is wanted, stir in half a pound of yellow ochre. If a *fawn* color, add to half pound of yellow ochre, a quarter pound of Indian red. If a neat *gray stone* color is desired, take half a pound of French blue, and a quarter pound of Indian red. For a neat *drab*, add half a pound of burnt sienna, and a quarter pound of Venetian red. Other colors can be made to suit one's taste. Every body who has half an eye, (or weak eyes!) sees that either of the above colors is preferable to the glaring *white* which has so long been used on fences and out-buildings. The white vitriol, we may add, seems to harden and fix the color, so that it is not necessary to repeat the white-washing for several years.

Coffee for the Times.

The present high price of coffee will lead to its less abundant use (not a bad result), and also impel many to adopt some substitute as a "warm drink." Here are two or three suggestions taken at random from the *Agriculturist* "Drawer:" A "Constant Reader," writes: "To 1 lb. of the best unburned coffee, add 3 lbs. of cleaned rye, previously washed, scalded and dried. Burn the whole carefully, and grind fine as wanted for use." The rye will add "body" to the fluid, and afford quite as much nourishment as an equal weight of coffee grains. 2.—The Editor of the Miner's Journal says he has for sometime used a beverage made of a quarter of a pound of coffee, and two quarts of wheat combined. "The wheat is boiled about twenty minutes in water, and then placed in a pan and browned the same as coffee. So far, we prefer it to the genuine article, and it certainly is more healthy. With a pound of coffee and eight quarts of wheat, which costs from 3 to 4 cents a quart, this beverage is produced so cheap that it makes up all the difference in the advance in price, of both tea and coffee."

3. Miss L. E. Palmer, of Luzerne Co., Pa., suggests a return to the old fashioned crust coffee, which has long been used, and is still used in many families as a "warm drink."—It is what the physicians call bread or crust "panada." Miss P. directs as follows: "Brown some stale crusts, or bits of bread, as thoroughly as possible without burning. Place in the coffee pot and pour boiling water over them; they require very little boiling. A coffee cupful of crusts will make two quarts of fluid."

Bouilli, or Pot-au-Feu.—A French National Dish.

The inquiry in our last has called forth responds from several correspondents who will please accept our thanks. They are somewhat alike, and we have only room for the following—just as written:

1. A condensed translation made for the *Agriculturist* by Mrs. Elizabeth Bagg, from a work by a noted French Chemist (Raspail), entitled "Manuel Annuaire de la Sante," (Annual Manual of Health,) under the chapter headed "Cuisine Hygienique," or hygiene of the Kitchen: "Choose meat of the best quality that can be procured, whether beef or mutton. Place your meat in twice its bulk of water, add a handful of salt, and let it boil very gently, removing all the scum. Then add an onion stuck with three or four cloves, a handful of celery and chervil, three cloves of garlic, a pinch of pepper, a laurel leaf, and a burnt onion, with a very few carrots and turnips. Keep up a gentle ebullition for 3 or 4 hours. Such a *bouilli* will alone suffice to cure indigestion. To be eaten with toasted bread, or better still, boiled rice or vermicelli, and other Italian pastes."

2. Contributed by S. L. Urmston, Beaver Grove, Ill.: "Take a brown earthen crock—a kettle will answer. Put in 6 lbs. of beef, and 4 quarts of water, set near the fire, and skim. When nearly boiling, add 1½ spoonfuls of salt, ½ lb. of liver, 2 carrots, 4 turnips, 8 young or 2 old leeks, 1 head of celery, 2 onions, and 1 burnt onion, with a clove in each, and a piece of parsnep. Skim again, and let it simmer 4 or 5 hours, adding a little cold water now and then. Take off part of the fat, put slices of bread into the soup dish; lay half the vegetables over and half the broth, and serve the meat separate with the vegetables around."

3. From a subscriber at Germantown, Pa.: "Two or three pounds of beef from neck or breast, after being well washed, put it in a pot twice the size of the meat, and fill up with cold water; let it simmer at least an hour, skimming all the time. Then add 2 large spoonfuls of salt, 1 large onion in which you will stick 4 cloves, a bunch of green onions, celery, chervil, a little garlic, a leaf of the bay laurel tree, 1 large or 2 small carrots, 2 or 3 turnips, a little parsley. A small teaspoonful of brown sugar gives a nice taste and a pretty color to the soup. Let it simmer for 5 hours; then put in what you please—bread cut up in blocks which you put in just before sending to the table, or boil in the broth tapioca, vermicelli, macaroni or dumplings made quite small. No pepper until on the table.——The above recipe was given by a *Parisienne*, but American cooks can adapt it to American palates." [All the above would need some "*adaptation*" to suit our taste.—From N. M. Root of Hillsborough Co., N. H., we received a recipe, the same as No. 2, which is accredited to Soyer.—ED.]

To Cook a Beef's Heart.

We stated in the February *Agriculturist*, (page 37) that owing to want of knowledge of the value of beeves' hearts, or of the method of cooking them, the N. Y. City butchers find slow sale for hearts weighing 6 lbs. each, at 10 cents a piece. Several correspondents from the country write that they consider this part of the animal quite a delicacy. The following are some of the directions sent to the *Agriculturist*:

1. "H." of Genesee Co., Mich., says it is excellent cooked thus: "Gash it, and fill it with stuffing, the same as a turkey; then boil it in water enough to cook it, so that when done there will be just enough to form a gravy."

2. J. Langdon, Vinton Co., O., recommends (for stuffing we suppose) ¼ lb. beef suet, 1 lb. bread, 3 eggs, a little parsley, nutmeg, pepper, and salt.

3. L. E. Kimberly, Litchfield Co., Conn., writes: "Take the heart and skirts, soak over night in cold water. Boil until tender; when cold, chop all together very fine, and sprinkle in a little salt. When wanted for use, take what will be sufficient for a meal, put it in a frying pan over a slow fire and season with butter, pepper, salt and sage. A little flour and water is thought an improvement by some, as the heart itself is very dry."

4. T. B., near Moorestown, N. J., writes: "Make a good dressing of wheat-bread, pepper, salt, and a little piece of butter; wet it with cream, or milk, (if you have neither cream nor milk, a little water will do); fill the heart with it; skewer it well; put it in a pot with plenty of water, and stew it down so as to make a good gravy. It makes a good and cheap meal; my family think it as good as any part of the beef."

5. S. S. Barstow, of Sullivan Co., N. H., gives the following simple directions: "Boil the heart tender. Then chop, but not as fine as for mince meat; add a little boiling water, a piece of butter, salt, pepper, enough wheat bread crumbs to thicken it a little, and simmer all together. Very palatable."

Note.—A friend at our elbow says a beef's heart is the very best of meat for mince pies. If so, it is strange that our city pie-men have not found it out ere this.—ED.] [Dog-meat is cheaper.—*Printer.*]

Well Tried Recipes for Good Things—but not very Cheap.

Coffee Ice Cream.—Brown 2 gills of coffee; put it hot and unground into a quart of sweet rich milk, boil it, adding the yolks of 8 eggs, strain it through a sieve, sweeten and freeze it, giving frequent and thorough agitation. If properly done it will not be discolored.

Light Cake for Breakfast or Tea.—One cup of sugar, 2 eggs, ½ cup of melted butter, 1½ cupfuls milk, 2 teaspoonfuls cream of tartar mixed with the flour, 1 teaspoonful of soda, flour enough to make a stiff batter. It will bake in 20 minutes if the oven is hot.

Coffee Cake.—One cupful of butter, 1 cupful of sugar, 1 cupful of molasses, 1 cupful of liquid coffee, 1 teaspoonful of soda, 2 teaspoonfuls cream of tartar, flour enough to stiffen it, cloves, cinnamon and nutmeg to taste—add fruit if you please.

Windsor Cake.—Two cupfuls Indian meal, 4 cupfuls flour, 4 cupfuls milk, ½ cupful molasses, 1 teaspoonful of soda, bake in pound cake tins. Half the quantity may be used.

Two Ways of using cold boiled Fish.—(1) Take 2 lbs of cold fish, cut it into very small pieces, scald 1 pint of milk in a sauce pan, mix in enough flour to make a paste, and ½ lb. butter; season with pepper and salt, and then whip in the yolks of 4 eggs, one by one; butter a dish, lay in first a layer of fish, then of the paste, and so on to fill the dish. Bake ¾ hour in moderate oven.

(2) Cut up a fish in convenient pieces, and put in a jar a layer of fish and then spices, (pepper, cloves, allspice and mace to taste,) until the jar is filled; then put in vinegar enough to cover thoroughly. Tie a paper tightly over the jar; then spread a paste of flour and water over the paper, set it in the oven for 8 hours. Blue fish is good, but shad is better. If rightly done, the bones will be entirely absorbed. It is excellent.

Crullers.—Dissolve 1 teaspoonful of saleratus in 4 spoonfuls of milk, or in 3 of milk and 1 of wine; strain it on a tumblerful of flour, adding 4 spoonfuls of melted lard or butter, and a teaspoonful of salt; beat 4 eggs with 7 spoonfuls of rolled sugar; work all together with a grated nutmeg, and add flour to make it roll out easily. Cut out and fry as usual in plenty of hot lard.

Savoy Cake.—Half lb. of fine sugar, ¼ lb. of flour, 4 eggs, half the grated rind and juice of a lemon. Beat the whites of the eggs to a froth, add the sugar gradually; when the oven is ready, stir in the lemon and yolks well beaten; sift in the flour as light as possible; drop by half spoonful on buttered tins. Sift on a little white sugar and bake immediately.

Finale of the Corn Bread Exhibition—Balance of 100 Recipes.

Below we give forty more of the recipes or directions, accompanying the loaves of Corn Bread and Corn Cake, at the recent exhibition at the *Agriculturist* office, with the epitomized notes of the Committee. These will be found not less interesting than those given in our previous two numbers. It is almost remarkable that in all of the hundred recipes published, no two appear to be exactly alike; and the same would be the case, should we give the 120 others which we have on hand. We would be glad to do this, but probably our lady readers generally, will find all they desire in those so far printed, and we can not spare any more room—at present at least. We therefore close the subject, with again returning our thanks to the public spirited ladies, who contributed the works of their fair hands to the enterprise, which, we humbly trust, will be the means of inciting a much greater interest in a subject of so much importance as that of promoting the more general use of our own native and abundant cereal crop.

In printing the "Prize Recipes" for Corn Bread, a typographical error occurred, and we reprint two here, in the exact words of the contributors.

34. (1st prize.)—Two quarts meal, one pint light bread sponge, half pint flour, tablespoonful of salt, and warm water sufficient to wet the whole; work well, and let it rise; then work over, put in the pan, let it rise again, bake one hour and a half in a brisk oven; this is good steamed or toasted, at a week old.—Mrs. Jane J. O'Brien, Carrick, Alleghany Co., Pa."

24. (2d prize.)—Mix 2 quarts of new corn meal with 3 pints of warm water; add 1 *teaspoonful* of salt, 2 teaspoonfuls sugar, 1 large *tablespoonful* hop yeast. Let it stand in a warm place 5 hours to rise; then add ¾ pint, or 1½ cupfuls of wheat flour, ½ pint warm water: let it rise again 1½ hours; have a pan well greased with sweet lard, into which pour it, and let it rise a few minutes, then bake in a moderately hot oven 1 hour and 20 minutes. This is much better hot.—Mrs. Lott Cornelius, Locust Valley, Queens Co., L. I." [The chief error in printing this at first was in recommending a tablespoonful of salt, instead of a teaspoonful, a rather important error, to be made by two bits of type-metal.—ED.]

No. 2. Corn Bread with Cost.—By Mrs. Louis C. d'Homergue, Middlesex Co., N. J. One lb. corn meal, 2 c.; 1 lb. wheat flour, 3½ c.; 1 pint rising or yeast, ½ c.; 1 tablespoonful salt, ¼ c.—total 6¼ cts.; scald the meal in 1 quart boiling water, let it get lukewarm; put in rising, knead in the flour; add salt, let it rise; bake 1 hour in moderate oven. (*Com. Notes:* "Cheap; good.")

No. 5. Corn Bread.—By Mrs. H. C. Compton, Essex Co., N. J. One quart corn meal, 1 quart buttermilk, 1 teaspoonful soda, 2 eggs; bake 30 minutes. (*Com. Notes:* "Light, well baked, very white, good.")

No. 14. Molasses Corn Cake.—By Mrs. J. H. Anner, Rockland Co., N. Y. Two cups corn meal, 1 cup wheat flour, 2 cups molasses, 1 cup sweet milk, 1 egg, 1 teaspoonful salt, 1 teaspoonful soda, 2 teaspoonfuls cream tartar, a lump of butter size of egg. Bake 2 hours. (*Com. Notes:* "Very light and good.")

No. 27. Corn Bread.—By Mrs. S. S. Jessup, Harlem, New-York Co., N. Y. Take 1 lb. corn meal; rub into it ½ teaspoonful salt, and 1 teaspoonful soda, 1 egg, and a tablespoonful of lard or drippings; mix with 1½ pints of sour milk; pour the mixture into a buttered pan, and bake ¾ hour. Cost a little less than 5 cents. (*Com. Notes:* "A very good loaf.") No. 28, a wheat and Indian loaf, by the same, was very excellent. Recipe lost, probably taken away by some admirer of the loaf.

No. 40. Corn Meal Bread.—By Mrs. Mary J. Davis, Kent Co., Md. Two gallons warm water, 2 gallons white corn meal, 3 quarts fine wheat bran, (sifted through a corn meal sieve from wheat bran,) 2 tablespoonfuls salt; mix well together; set in a warm place 6 hours in an earthen jar; then stir well again and bake. (*Com. Notes:* "A monster loaf, good quality, wholesome.")

No. 43. Corn Bread.—By Mrs. S. J. Pine, Suffolk Co., N. Y. One and a half pints Indian meal, ¾ pint wheat flour, ½ pint good emptyings, and a little salt; add warm skim milk, sufficient to make a batter stiff enough for a spoon to stand in; raise 4 hours; bake ¾ hour in slow oven. (*Com. Notes:* "Well baked, light, very good."

No. 63. Corn Cake.—By Miss E. Merrit, Orange Co., N. Y. One pint sweet milk, 1 pint sour milk, 1 quart corn meal, 1 tablespoonful lard, 3 tablespoonfuls molasses, 1 teaspoonful soda, 1 teaspoonful salt; beat well together, and bake in a quick oven 1½ hours. (*Com. Notes:* "Well baked, and good.")

No. 64. Corn Bread.—By Miss E. Merrit, Orange Co., N. Y. One cup sweet milk, 1 cup sour milk, 4 tablespoonfuls cream, or 1 of butter, 2 tablespoonfuls Graham flour, (flour ground coarsely from good, well cleaned wheat, and not bolted,) 1 teaspoonful soda, 1 teaspoonful salt, Indian meal enough to make stiff batter. Bake 1 hour. (*Com. Notes:* "Light, well baked, a nice loaf.")

No. 68. Indian Loaf.—By Mrs. M. T. Willis, Queens Co., N. Y. One and a half quarts Indian meal, scalded with 1½ pints boiling water, and immediately thinned with 3 pints tepid water; add ⅔ quart unbolted Graham flour, ⅔ quart chopped sweet apples, 1 gill molasses, and 1 spoonful salt. Bake in a hot oven 6 or 8 hours. The apple may be omitted. (*Com. Notes:* "Very good for those who like a *moist* loaf.")

No. 76. Corn Bread.—By Mrs. D. G. Henry, Addison Co., Vt. Two quarts corn meal, 1 quart wheat middlings, 1 cupful molasses, 1 teaspoonful saleratus; mix with 1 pint buttermilk, and cold water enough to make it very soft; bake 4 hours with a moderate fire. Keeps well one week in cool weather. (*Com. Notes:* "A very large loaf. Quality fair. Not quite enough baked.")

No. 80. Corn Loaf.—By Mrs. Ermina Moody. (No address.) Five parts good corn meal, 1 part wheat flour; mix the flour and meal well together; then add 1 cent's worth yeast, ½ cup molasses, ½ teaspoonful salt, and warm water enough to make a stiff batter; set to rise in a warm place; when risen sufficiently, bake 2 hours in a moderate oven. I prefer rye to wheat flour. Cost 7¼ cents. (*Com. Notes:* "Well baked, quality good.")

No. 81. Corn Bread.—By Mrs. John Welles, Hartford Co., Conn. One part wheat flour, 5 parts white corn meal, 1 teaspoonful sugar, and one of salt for each loaf; stir well together; wet with warm milk to the consistency of thick batter; raise with common brewer's yeast, using twice the amount as for all flour; bake 1 hour, cool gradually. (*Com. Notes:* "Well baked, light, good.")

No. 82. Corn Cake.—By Mrs. N. Dean, New-York City. 3½ lbs. corn meal, 1 quart molasses, 3 pints boiling water, 1 tablespoonful salt. Mix the corn meal, salt and water; after a thorough stirring, add the molasses, stir again, and bake in a hot oven 2½ hours. (*Com. Notes:* "A large, fine looking loaf, but not quite light enough.")

No. 83. Corn Bread.—By Mrs. H. E. Moseley, Hampden Co., Mass. Two and a half pints corn meal, 1 pint boiling water to scald it, to be cooled after a few moments with ½ pint cold water. To this add 2 large spoonfuls good, lively yeast, 2 of molasses, and 1 teaspoonful fine salt. Mix well, and knead in ½ pint wheat flour. When sufficiently risen, bake 2 hours in a stove oven. (*Com. Notes:* "Well baked, fair quality.")

No. 85. Brown Bread.—By P. Jane Tibbetts, Litchfield Co., Conn. Two and a half pints corn meal, ½ pint wheat flour, 2 spoonfuls molasses, 1 cup sour milk, 1 teaspoonful saleratus; mix with sufficient cold water to make a thin batter; bake in a rather slow oven 5 hours, in a covered tin, the cover overlapping. (*Com. Notes:* "Properly baked, light, good.")

No. 86. Corn Meal Tea Cake.—By Mrs. Eliza Renoud, Fairfield Co., Conn. Two teacups buttermilk, 1 teaspoonful saleratus, 2½ cups corn meal, 1 cup molasses, 2 eggs, 2 cups flour, 1 teaspoonful ginger; bake ½ hour. (*Com. Notes:* "Light, well baked, quality fair.")

No. 87. Corn Bread.—By Mrs. Eliza Renoud, Fairfield Co., Conn. Two cups light yeast, made from flour, 1 cup milk and 1 of water, lump of saleratus, size of large pea; stir it up with meal, and let it rise; butter the pan; then stir again, and pour in: when light, bake 1 hour. (*Com. Notes:* "Light, well baked, of good quality.")

No. 88. Wheat and Indian Bread.—By S. B. H. Williams, New-London Co., Conn. Easily made, thus: scald 1 pint corn meal; make thin enough for griddle cakes; add enough cold water to make it lukewarm; then add 3 pints corn meal, and 3 of wheat flour; mix thoroughly about as stiff as common brown bread; bake, according to size of the loaf, 1 hour for this size, and longer for a larger loaf. The material for the loaf sent costs but 2 cents, the above mixture being sufficient for six such. (*Com. Notes:* "Not quite light enough, but well tasting, made of good corn, probably freshly ground, which is half the battle.")

No. 89. Corn Bread.—By the same. Contains only 1 part of flour to 5 of corn meal. Made otherwise precisely as No. 88. The contributor says: "If still lighter bread is desired, a little molasses and soda can be added, but we prefer the natural sweet taste of the meal, if the bread is not quite as light." (These loaves, 88 and 89, were decided by the committee, to be not as light as desirable; but they had the pure, unadulterated, delicious taste of corn meal, undisguised by molasses and alkalies—just what unprejudiced tastes love. Who does not smack the lips with pleasure while munching boiled corn from the cob in August? Corn bread, almost as simple, more healthy, and about as finely flavored, can be made.—*Rep.*)

No. 104. Corn Loaf.—By Mrs. J. H. Fullerton, Yorkville, New-York Co., N. Y. Two cups water, blood warm, 2 tablespoonfuls molasses, 2 tablespoonfuls vinegar, 1 teaspoonful salt, 1 teaspoonful lard, ½ cup wheat flour, 1 teaspoonful soda in sufficient water to dissolve it; mix all well together; add 2½ cups corn meal. Bake 1 hour in a quick oven. This recipe makes excellent griddle cakes, with less meal to make a batter. (*Com. Notes:* "Well baked, light, fair.")

No. 106. Corn Meal Bread.—By F. L. Collins, Litchfield Co., Conn. Two lbs. sifted corn meal, 5 oz. wheat flour, stirred into the following ingredients: 1 quart sour milk, 2 teaspoonfuls saleratus, 2 eggs well beaten, 1 tablespoonful brown sugar, butter the size of an egg, 1 teaspoonful salt. The mixture to be about as stiff as for pound cake; bake in a medium heat 1¼ hours. (*Com. Notes:* "Not baked quite enough, otherwise good.")

No. 108. Indian Loaf.—By Mrs. Barnes, Kings Co., N. Y. Five cups corn meal, 1 cup rye flour, 6 cups boiling water, 2 tablespoonfuls molasses, a little salt. Scald the corn meal; let it stand until cool; then add the molasses, rye, and salt; let it stand over night; in the morning bake in a deep pan 3 hours. (*Com Notes:* "Light and good, but rather too much crust formed in baking.")

No. 109. Yellow Corn Bread.—By Mrs. Barnes, Kings Co., N. Y. One quart corn meal, 1 quart boiling water, and a little salt. Mix and bake in a shallow pan 1 to 2 hours. (*Com. Notes:* "Very economical, and pretty good.")

No. 111. Corn Cake.—By Mrs. Barnes, Kings Co., N. Y. Two cups corn meal, 2 cups milk, 2 eggs, 2 tablespoonfuls sugar, ¼ teaspoonful soda, and a little salt. Mix and bake in a shallow pan 1 hour. (*Com. Notes:* "A very good tea cake.")

No. 112. "Little Rhody."—By Mrs. J. E. Macomber, Newport Co., R. I. Two and three quarter lbs. corn meal, 1¼ lbs. rye flour, (being same price as corn meal, and less cost in proportion to the loaf, than if one-sixth of wheat had been used,) 1½ pints sweet milk, 1 quart boiling water. Pour the boiling water upon the corn meal, mixing both together; then put in the milk and rye meal, and mix all together. A moderate oven the first hour; then increase the heat, and let it remain in the oven 4 hours from the first. It is well to bake in the evening, and let it remain in the oven over night. Dish used, an iron kettle, covered. Weight of loaf, 6½ lbs. (*Com. Notes:* "A large, well looking loaf of good, substantial, healthy bread.")

No. 113. "Cousin Rhody."—By Mrs. J. E. Macomber, Newport Co., R. I. One quart boiling water, 2¼ lbs. corn meal, 1 lb. rye meal, 1 pint sweet milk. Mix the boiling water with the corn meal; add the rye meal and milk, mixing all together. Bake 4 hours in a deep tin pan covered. (*Com. Notes:* "A very nice loaf, had it been baked more.")

No. 114. Cheap Corn Meal Bread.—By Mrs. George S. Jacobs, Middlesex Co., Mass. Mix 1½ pints corn meal with 1 teacupful flour; add 2 tablespoonfuls molasses, 1 cupful sour milk, and enough saleratus to remove the acidity; next add sweet milk, if you have it, if not, cold water will answer; mix nearly as soft as you would for soft gingerbread, and add a little salt. Bake from ½ hour to 1 hour. (*Com. Notes:* "Well baked, light, well tasted.")

No. 115. Corn Cake.—By Mrs. Benj. F. Chase, Newport Co., R. I. One pint corn meal, ½ pint wheat flour, 1 pint milk, 3 eggs, 2 teaspoonfuls cream tartar, 1 cup sugar, 1 teaspoonful salt; bake ½ hour. (*Com. Notes:* "Very nice. For breakfast or tea, it would be hard to find anything better.")

No. 116. Corn Bread.—By Mrs. B. F. Chase, Newport Co., R. I. Five pints corn meal, 1 pint rye meal, 1 teacupful molasses, 2 teaspoonfuls salt, 3 pints milk, or water, or both, (enough to form a soft batter.) Put into a tin kettle, with a closely fitting cover, (a tin mould with a hollow, open center is better;) set in a kettle of hot water, and keep it boiling through the day; let it remain in the water over night, and you have a warm loaf for breakfast. (*Com. Notes:* "Good.")

No. 117. Corn Bread.—By Mrs. B. S. Arnold, Providence Co., R. I. One quart corn meal, 1 teacupful flour, 1 teacupful molasses, ½ cupful sugar, 1 teaspoonful saleratus, dissolved in a pint of sour milk, and 1 egg; mix to a stiff batter, and bake 1¼ hours. (*Com. Notes:* "Of fair quality.")

No. 132. Indian Bread.—By Mrs. Wm. Hinton, Kings Co., N. Y. 1¼ lbs. sifted Indian meal, ½ lb. wheat flour (rye will do as well,) 3 ounces lard, 1 gill home made yeast, 2 tablespoonfuls salt; mix the meal and flour; rub in the lard thoroughly; add the yeast and salt, and as much warm water as will make a soft dough; this to be done at bed time; in the morning put it into a pan rubbed with butter, and bake 1 hour. (*Com. Notes:* "Well baked, light, well tasted, but too much salt.")

No. 141. Cup Cake.—Mrs. A. D. Weymouth, Worcester Co., Mass. One quart corn meal, 1 teacupful flour, 1 quart sour milk, 1 tablespoonful molasses, 1½ teaspoonfuls saleratus, 1 teaspoonful salt. I take the milk first; add the meal without scalding; then add the other ingredients, raise thoroughly, and bake 1½ hours. Cost—corn meal 2½c., wheat flour ½c., sour milk 2c., molasses, saleratus, and salt, ½c.—total 5½c. Weight 4 lbs., or 1½c. per lb. (*Com. Notes:* "Light and good.")

No. 145. Corn Bread.—By Mrs. J. G. Caldwell, Queens Co., N. Y. Two quarts sifted corn meal; scald the meal, add cold water enough to leave it but milk warm; then add ½ teacupful yeast, a little salt, and ½ teacupful rye flour. Stir all together; let it stand over night; in the morning add ½ teacupful molasses, and 1 teaspoonful saleratus; put in a pan, and bake 2 hours. (*Com. Notes:* "Well baked, light, good.")

No. 153. Brown Loaf.—By Mrs. D. S. Woodward, New-London Co., Conn. Two and a half quarts corn meal, mixed with scalding water until thoroughly wet; when nearly cool, add 1 quart of rye meal, 1 cup of yeast, ½ cup molasses; mix thoroughly, and set to rise 1 hour. Bake 3 hours. (*Com. Notes:* "A large, fine looking loaf, not quite well baked, but otherwise good.")

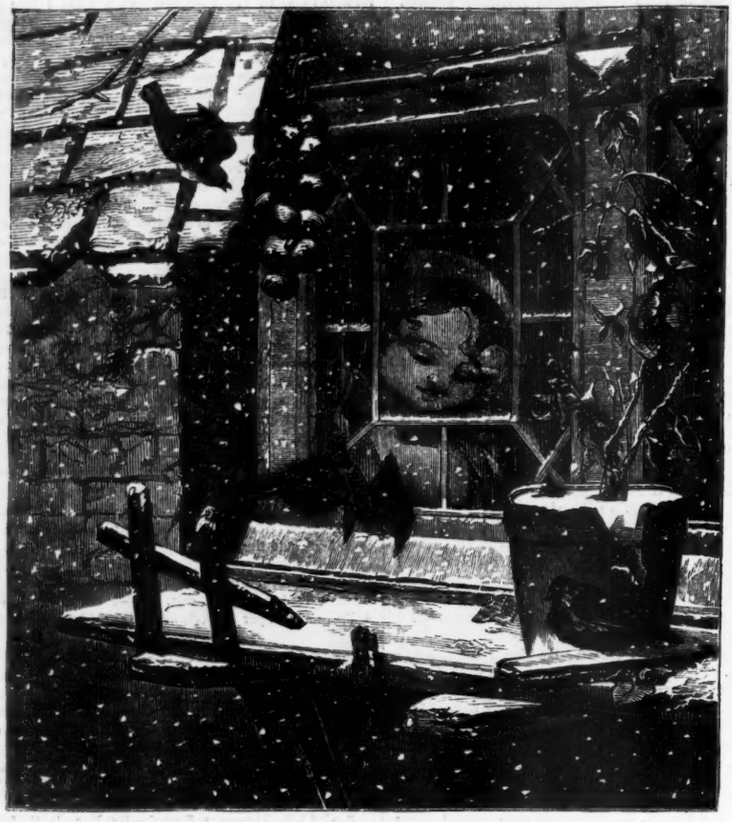
No. 159. Corn Sweet Cake.—By L. E. Palmer, Luzerne Co., Pa. One teacupful of butter and two of sugar, rubbed well together; 5 eggs, whites beaten apart, 1 cup sour milk, 3 cups Indian meal, 2 cups wheat flour, 1 teaspoonful saleratus, and half a nutmeg. Of course it would be better with a larger proportion of flour, but we think it pretty good, made as above. (*Com. Notes:* "Light, well baked, a very good cake.")

No. 187. Corn Bread.—By Arabella Culverwell, Laporte Co., Ind. One pint sour milk, 1 pint corn meal, 2 tablespoonfuls wheat flour, 1 tablespoonful butter, 2 tablespoonfuls molasses, 1 teaspoonful soda, 1 of salt, 2 eggs. Bake 1 hour. (*Com. Notes:* "Pretty good.")

No. 188. Rye and Indian Bread.—By Mrs. H. Edwards, Allegany Co., N. Y. Three pints corn meal, 1 pint rye meal, sifted through a common sieve; mix with boiling skim milk enough to wet it thoroughly, and stir with a spoon until well mixed; let it stand 1½ to 2 hours, stirring often; add 1 teaspoonful salt; fill 2 iron basins with the dough, turn them together, and put them in the stove, and bake moderately 2 to 3 hours; then leave to cool gradually in the stove. (*Com. Notes:* "A large loaf of very fair quality, and specially economical.")

No. 189. Family Loaf.—By Clarissa Edwards, Allegany Co., N. Y. Two quarts skim milk, scalding hot, 1 tablespoonful salt, 1 quart corn meal, stirred in by handfuls, ½ pint rye meal, not bolted, but sifted; after stirring thoroughly, add 1 cup cold milk, stirring smartly; let it stand 10 or 15 minutes, then put into a cast iron basin, cover with another basin; bake not less than 4 hours, 6 is better; can hardly be baked too much, unless burnt. (*Com. Notes:* "A good, wholesome food.")

No. 193. Corn Bread.—By Mrs. D. W. C. George, Worcester Co., Mass. Five cups corn meal, 1 cup flour, ½ cup molasses, 1 teaspoonful saleratus, and 1 teaspoonful salt. Mix soft, and, if the weather is cold, let it stand mixed over night. To avoid hard crust, steam 2½ hours; then put in a moderate oven long enough to dry off and brown a little. (*Com. Notes:* "A fair loaf.")



SNOW-STORM IN SPRING.

Engraved for the American Agriculturist.

The Editor with his Young Readers.

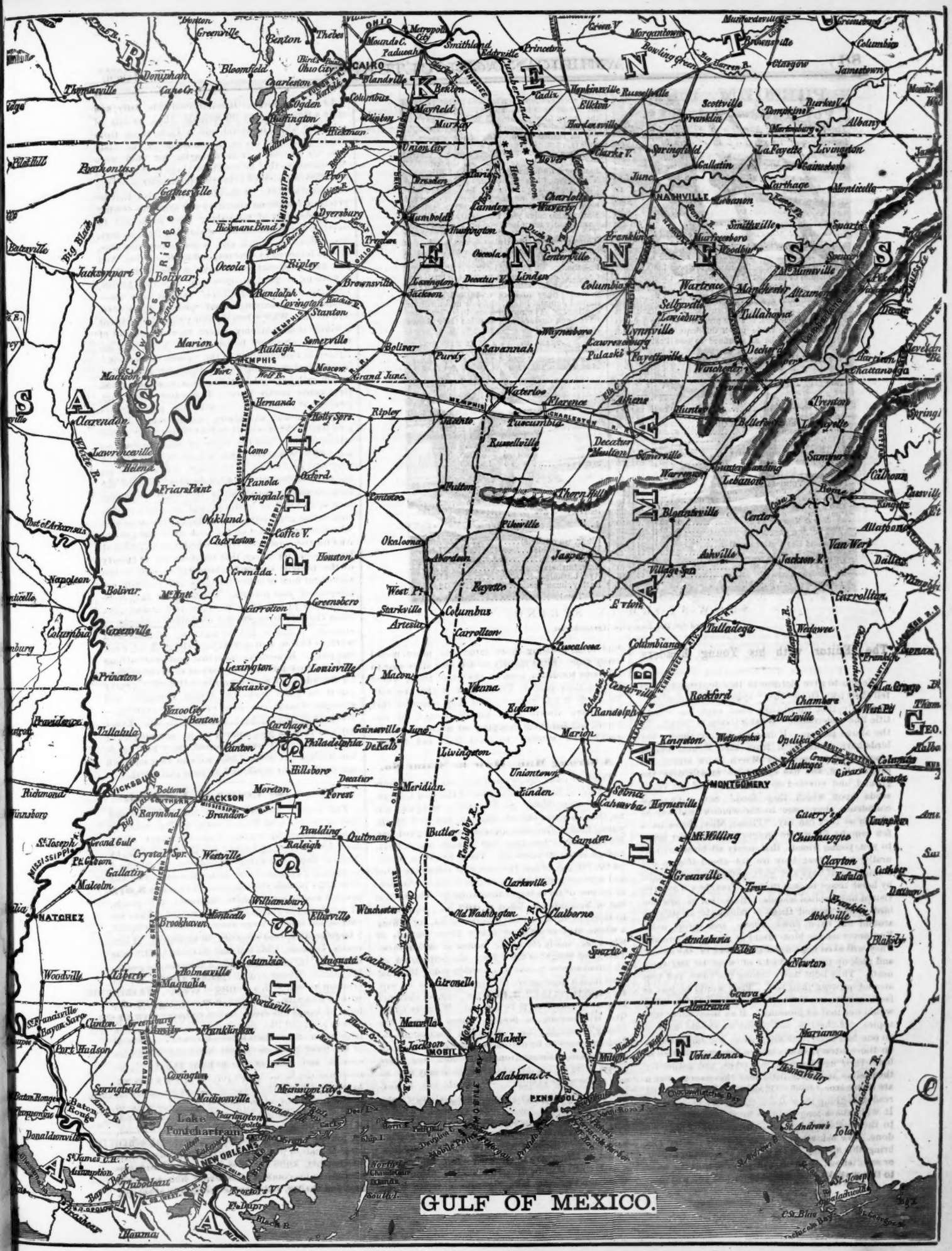
We aim to give pictures in this department that tell their own story—that "speak for themselves" so plainly, that they hardly need even the artist's title line underneath. What a lesson is taught by the above picture. It is early Spring time. The birds have come forth from their Winter hiding places, but an untimely March snow storm has caught them, and has spread its mantle over the ground, and covered up the insects, and last year's seeds upon which they feed. See, with what confidence they come to the window, and say as plainly as they can say: "Please, Miss, throw us a few crumbs, for we are hungry." Did it ever occur to you, young friends, that nearly all birds are naturally *tame;* that they are not afraid of men and women, or of boys and girls, until they are taught by harsh usage to fear them? Travelers who have visited uninhabited islands, tell us, that at first the birds come around them as familiarly, as they do around our oxen, cows, horses, and sheep, here. You never see the birds afraid of domestic animals. They will even light upon the backs of the sheep, and pick up the stray locks of wool to line their nests. They light down among the cows, and hop around between their feet. They would be just as familiar with us, if we never misused them. And would not that be pleasant? How many more nice apples, and cherries, and plums we should have, if no one had ever frightened away the birds, but if, on the contrary, these little songsters felt free to build their nests among our trees, and gather for themselves and their little ones the insects, which are their natural food. (Please turn to page 75, and read something there about the Birds and Insects.) It will take a long time to bring back the birds to their *natural* confidence in us, but it may be done. We ask all our young friends to try and bring this about. Never chase the birds, or halloo, or say "shoo" to them, and never permit the boys to throw sticks or stones at them, and you will soon find them growing more tame and more useful every year. Birds usually return year after year to the same localities, even to the same trees, where they or their parents lived. That is the case with the birds in our picture; and they *remember* that they have always been kindly treated, or you would not see them hopping so fearlessly to the well-known window to meet their old friend.

A Strong Man—How he 'Came So.

Thirteen years ago, a small nervous boy, 16 years old, entered the Freshman class of Harvard College, at Cambridge, Mass. So diminutive and puny was he, that only one out of about a hundred of the young men in the class measured and weighed less. He still weighs less than 150 pounds we believe, though about 29 years old. Yet at Brighton, Mass., on the 9th day of last October, this same man lifted and held up a platform on which stood *twelve* men, every one of them larger than himself. On the 21st day of November he lifted **2,007** lbs., equivalent to shouldering a very large horse, or ox, or lifting a whole load of hay, or thirty three bushels of wheat, or nearly *thirty six bushels of shelled corn!* This great weight of 2,007 lbs., was supported on his shoulders by means of a wooden yoke, like that used in the sugar grove to carry two pails of sap. He expects yet to lift **3,000** lbs., and we shall not be greatly surprised if he does so. We refer to Dr. Geo. B. Windship, of Boston, whom we take the liberty of naming the "American Sampson."—— There appears to be nothing in his natural form, or constitution, different from other men, and there seems to be no reason why other men may not attain to the same strength. We would not, however, advise any one else to aim at his particular feats, but the method by which he has gained his present physical health and power, affords a useful lesson to boys, and girls too. Most of our young readers have heard of the man who carried an ox, and how he did it. He began by carrying a calf, and carried it daily until it grew up. In a similar manner Dr. Windship began to take vigorous exercise while yet a boy at college. He continued this daily, and after a time began to lift weights, then barrels of gravel to which he could add a little more from day to day. The use of the muscles of the body not only increased their strength, but they were disciplined so that he could use them in the desired direction, as referred to in speaking elsewhere of the blacksmith's boy. It should be stated also, that he practiced temperance in eating and drinking—eating but moderately of nourishing food so as not to overtax the stomach, and abstaining from liquors, tea, coffee, etc., which give a temporary stimulus, always followed by a corresponding depression. And just here let us say to our boys on the farm, there is nothing so good to give you vigorous health, strength, and "good feelings," as your daily toil—holding plow, carrying wood, picking up stones, and so on. Why, when sixteen years old we spent a winter at an Academy, where there were a lot of City boys, who were larger than we were, and delighted in making sport of the "green farmer boy.' We remember taking two of them by the collar one in each hand, and holding them so strongly that they could hardly move. This came from long practice at wrestling——with the plow-handles on stony ground, and among stumps and roots in new land. (That was a good while ago, but those strong muscles, and the vigor of constitution, are not lost.) Whatever a man is to do in after life, the very best *preparation* is thorough active labor on the farm, with the plain substantial food of the farmer's table. Nearly all of the really successful men in all kinds of business, and in every profession in this great city, and in other cities, are those who lived and *worked* on the farm until full-grown. And for the comfort of those who are so troubled at being poor, let us say, that nineteen out of twenty of the present successful farmers, as well as the successful men in other business and pursuits are the sons of *poor* parents. The fact that they were compelled to use their muscles, and brains, gave them the very strength and discipline essential to success. A boy or girl brought up without hard work, is like an arm carried in a sling; it is weak and puny. Remember, also, that just what strong exercise does for the body—mental exercise does for the mind. A person may inherit wealth, or may get it by good luck—but bodily strength, and strength of mind, can *only* be got by exercise.—Work away then my boys, and my girls too. Every day's work pays you someth'ng in increased vigor and health; every lesson learned, every hard problem worked out *without help*, adds to your strength and discipline of mind, and to your *real* worth.

About the Crown of England.

Few persons have any idea of the brilliancy and cost of the Imperial State Crown, or Cap, worn by Queen Victoria on certain State occasions. Here are a few interesting items: It was made in 1838, by Messrs. Rundell & Bridge of London. It weighs 3 pounds, 3¼ ounces, troy; or a little over two and four-fifths pounds avoirdupois. It contains **3,075** jewels, consisting of 2,783 diamonds, 277 pearls, 17 sapphires, 11 emeralds, and 5 rubies. They are catalogued thus: 1 large ruby irregularly polished, 1 large broad-spread sapphire, 16 sapphires, 11 emeralds, 4 rubies, 1,363 brilliant diamonds, 1,273 rose diamonds, 147 table diamonds, 4 drop-shaped pearls, 273 pearls. These are all placed upon a cap of crimson velvet, with a border of ermine, and lined with white silk. The jewels are arranged in the form of bands, festoons, arches composed of diamonds arranged like oak leaves and acorns, one large cross, four Maltese crosses, etc.....Several of the most precious jewels belonged to former crowns, and some of them have been in possession of the Royal family for 500 years or more. As men estimate, the value of the crown amounts to many millions of dollars. For real utility in itself, it is of infinitely less value than three pounds of iron. To a man cast away upon a desolate island, the jewelled crown would be of no account, while three pounds of iron, in the form of steel, fashioned into hatchet, knife, needles, etc., would add immensely to his comfort by enabling him to obtain food and shelter, and perhaps the means of escape.


GULF OF MEXICO.

PREMIUM LIST,
For 1862---Vol. XXI.

Or Pay to Voluntary Agents who will attend to collecting names of new and old subscribers to the Agriculturist, and forwarding them to the Office.

☞In selecting articles for premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers. ☞WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞Every person collecting names for premiums, should send two copies of each list of names—one of them marked "For Premiums," and also with the name of the sender.

☞The premiums are offered for subscribers for Volume XXI (1862), *whenever received*. Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent. ☞Clubs need not be all confined to one Post Office.

Table of Premiums for 1862.

Names of Premium Articles.	Price of Premiums.	Names at $1 each.	Names at 80 cts. each.
2—Clothes Wringer, No. 2	$7 50	18	37
3—Clothes Wringer, No. 1	$10 00	23	48
4—Sewing Machine, (Wheeler & Wilson)	$45 00	90	180
5—Sewing Machine, (Wilcox & Gibbs)	$35 00	69	98
6—Anerold Barometer	$7 50	19	44
7—Hydropult	$12 00	30	48
8—Five Octave Melodeon (best)*	$75 00	125	237
9—4½ Octave Melodeon (best)*	$60 00	104	182
10—Four Octave Melodeon (best)	$45 00	90	180
11—New Cyclopedia, 16 volumes	$48 00	96	140
12—Worcester's *Unabridged* Dictionary	$7 50	18	40
13—Five back Volumes Agriculturist, *p.p.*	$5 00	16	30
14—Four do do do do	$4 48	13	26
15—Three do do do do	$3 36	10	20
16—Two do do do do	$2 24	..	15
17—One do do do do	$1 12	..	10
18—Windsor & Newton's Paints	$2 50	..	20
19—Osborn & Hodgkinson's Paints	$1 50	..	15
20—Hand Corn Sheller (best)	$6 50	21	40
21—Straw and Hay Cutter (best)	$3 00	24	48
22—Best Subsoil Plow (2-horse)	$8 00	24	48
23—Various Books—*See terms below*			
25—Youth's Chest of Tools	$13 00	28	60
26—Gentleman's Chest of Tools	$20 00	43	80

* *See Advertisement, page* 94.

Premiums. 2, 3.—Wringing Machine.

We place this first, for it is nearly new, and one of the most useful articles for every family. The saving to garments would soon pay the cost of the implement, to say nothing of the saving of woman's labor. The machine is set upon the side of any tub; the garments drop out into a basket. A child can quickly wring out a tub full of clothes—No. 2, costing $7.50, is just the thing for common family use.

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine,** (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *four* years' use in our own family, in connection with other machines. We want no better.—Premiums 4 and 5 will be selected new at the manufactories, be well boxed, and forwarded without expense to the recipient, except for freight. Full instructions sent for setting up and using.

Premium No. 5—Sewing Machine.

69 Subscribers at $1 each, (or **98** at 80 cents each,) will entitle the person procuring them to *Willcox & Gibbs'* **$35 Sewing Machines,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than a year, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines.

Premium No. 23—Good Books.

Here is an opportunity to get a good library at little expense. Any person getting up a club of **16** or more names, may choose any desired Books from the list advertised on page 91, *to the amount of 12½ cents for each name sent at 80 cents*, (or 83⅓ cents for each name sent at $1); the books will be *delivered to the recipient free of all expense for postage.*

☞For descriptions of other premiums see Jan. No., page 28.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Wednesday Morning, Feb. 19, 1862.

*** The materials for this review are furnished specially for the *Agriculturist* by a reliable man of long experience, who, throughout the year, spends the whole of each business day in the markets, watching the transactions and collecting information, and we flatter ourselves that this report is one of the most correct anywhere published.

The Breadstuff Markets have been comparatively quiet for a month past. The condensed but comprehensive tables below show at a glance the transactions—including receipts, sales and exports. The table of Current prices indicate the change in selling values. Both Wheat and Flour are somewhat dearer. The recent Foreign advices have been encouraging to exporters, and they have also been favored by low rates for freights, and the greatly advanced value of foreign exchange. The bills drawn against shipments of Breadstuffs to England, which were hard to sell at 102@103 only a short time ago, have recently been in demand at 110 to 113@114. The receipts of Flour and Wheat from the interior have, taken together, been below those of the previous month, and decidedly less than for the corresponding period last year, as shown in tables 1 and 2, while the exports have been much larger this year, as seen in table 3. This has diminished the stock on hand, while the foreign demand is increasing. Holders of Breadstuffs are therefore firm, and with apparent good reason look for still better prices, especially as all our advices from abroad indicate the continuance of the heavy foreign demand which we have all along predicted, while no large addition to city supplies can be expected before the opening of the canals. Many foreign orders, recently received, have been limited to such rates that they could not be filled, with the views held by owners here, which has restricted the transactions.... Corn has been quite freely offered, and prices have declined. The demand has not been very active, and at the close the market is quite heavy, though holders are very reluctant to make any concessions to buyers.... Rye has been in lively request for export, and has advanced.... Barley also advanced materially early in the month, but has recently been less sought for, and is lower again.... There has been less doing in Oats, which are cheaper.... The success of the Union forces, on land and sea, have had a very significant influence on the market for Cotton, which has fallen off in value, on an average, about 7c. ₱ lb.—the market closing heavily, with a downward tendency.... There has been a very large business transacted in Provisions, for both immediate and future delivery, at improved prices for Pork and Beef.... Wool has been in limited demand lately, and low and medium grades have declined.... The movements in other branches of trade have been moderate. The price table shows any changes in values.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days *this* m'th	155,000	111,600	134,500	97,700	148,000	172,000
26 days *last* m'th	272,000	61,300	45,200	22,550	63,000	128,150
SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	
25 days *this* month	394,000	914,000	1,175,000	196,000	186,500	
26 days *last* month	392,100	1,116,000	1,205,250	145,400	138,700	

2. COMPARISON WITH SAME DATE LAST YEAR.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days 1862	155,000	111,600	134,500	97,700	148,000	172,000
26 days 1861	159,500	235,000	133,400	8,270	73,300	77,000
SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley*	
25 days 1862	394,000	914,000	1,175,000	196,000	186,500	
26 days 1861	363,000	1,633,000	1,580,000	26,900	51,800	

3. *Exports from New-York, from Jan. 1 to Feb. 13.*

Flour, bbls.	*Wheat, bush.*	*Corn.*	*Rye.*	*Oats.*
1862.....356,887	1,542,610	1,471,747	150,855	2,297
1861.....237,506	1,114,492	886,130	——	13,852

4. *Breadstuffs Trade of Toledo in* 1861.

	Receipts.	Shipments.
Flour, (in bushels)	7,032,380	6,720,555
Wheat, bushels	6,277,407	6,288,936
Corn, bushels	5,312,038	5,074,366
Oats, bushels	41,428	46,171
Rye, bushels	31,198	29,610
Barley, bushels	12,064	6,607
Total	18,706,510	18,301,245

CURRENT WHOLESALE PRICES.

	Jan. 20.	Feb. 19.
FLOUR—Super to Extra State	$5 45 @ 5 90	$5 60 @ 6 10
Superfine Western	5 40 @ 5 55	5 60 @ 5 70
Extra Western	5 70 @ 7 00	5 90 @ 7 00
Fancy to Extra Genesee	5 95 @ 7 00	6 10 @ 7 00
Super. to Extra Southern	5 80 @ 8 25	6 05 @ 8 00
RYE FLOUR—Fine and Super.	3 00 @ 4 30	3 00 @ 4 25
CORN MEAL	2 90 @ 3 30	2 90 @ 3 30
WHEAT—Canada White	1 45 @ 1 50	1 48 @ 1 55
Western White	1 44 @ 1 52½	1 45 @ 1 58
All kinds of Red	1 26 @ 1 45	1 30 @ 1 50
CORN—Yellow	66 @ 67	60 @ 68
White	68 @	64 @ 75
Mixed	65 @ 66	64 @ 65
OATS—Western	41 @ 42	40 @ 41
State	42 @ 43	41 @ 42
RYE	81 @ 84	83 @ 85
BARLEY	72 @ 80	80 @ 90
HAY, in bales, per 100 lbs	85 @ 1 00	85 @ 95
CUTTINGS—Middlings, per lb	32 @ 34	27 @
RICE, per 100 lbs	6 75 @ 7 75	7 00 @ 7 75
HOPS, crop of 1861, per lb	17 @ 24	15 @ 23
FEATHERS, Live Geese, p. lb	80 @ 36	32 @ 38
SEED—Clover, per lb	7 @ 7¾	7 @ 7¾
Timothy, per bushel	2 00 @ 2 12½	@ 2 00
SUGAR—Brown, per lb	7 @ 9¼	6½@ 8¾
MOLASSES, New-Orleans, p.gl.	50 @ 50	50 @ 55
COFFEE, Rio, per lb	17½@ 20	18 @ 21
TOBACCO—Kentucky, &c, p.lb	9 @ 17	10 @ 18
Seed Leaf, per lb	6 @ 21	6 @ 21
WOOL—Domestic fleece, p. lb	44 @ 54	42 @ 54
Domestic, pulled, per lb	38 @ 50	36 @ 50
TALLOW, per lb	9¼@ 9½	9 @ 9¾
OIL CAKE, per ton	32 00 @37 50	31 00 @37 00
PORK—Mess, per bbl	11 75 @12 37½	12 37½@13 12½
Prime, per bbl	8 00 @ 9 50	8 50 @ 9 50
BEEF—Plain mess	11 00 @12 00	11 75 @12 50
LARD, in bbls., per lb	7¾@ 8½	7¾@ 8¾
BUTTER—Western, per lb	11 @ 15	11 @ 15
State, per lb	15 @ 21	16 @ 21
CHEESE	5½@ 7¼	5 @ 7
Broom Corn—per lb		4 @ 6
EGGS—Fresh, per dozen	16 @ 17	16 @ 17
Limed, per doz	14 @ 16	15 @ 16
POULTRY—Fowls, per lb	5 @ 9	7 @ 10
Geese, per lb	6 @ 7	5 @ 9
Ducks, per lb	8 @ 12	9 @ 14
Turkeys, per lb	6 @ 9	8 @ 12
Dried Apples, per lb	6½@ 7	6¼@ 7
Dried Peaches, per lb., peeled	18 @ 20	18 @ 20
Dried Raspberries, per lb	13 @ 14	13 @ 14
POTATOES—Mercers, p. bbl	2 00 @ 2 25	2 00 @ 2 50
Peachblows, per bbl	1 75 @ 1 88	1 88 @ 2 00
Western Reds, etc.—per bbl	1 38 @ 1 50	1 25 @ 1 75
Nova Scotias—per bush	50 @ 55	55 @ 60
Sweet Delaware, per bbl	3 50 @ 3 75	3 50 @ 3 75
ONIONS—Red, per bbl	1 00 @ 1 12	@ 1 75
White, per bbl	1 25 @ 2 00	2 00 @ 3 00
TURNIPS—Rutabaga, per bbl.	75 @ 1 00	@ 1 00
SQUASH—Marrow, per bbl	1 50 @	1 75 @
APPLES—Common, per bbl	2 50 @ 3 00	2 75 @ 3 00
Apples—good, per bbl	3 50 @ 4 50	3 50 @ 4 50
Cranberries, per bbl	8 00 @11 00	9 00 @12 00

N. Y. Live Stock Markets.—THE CATTLE MARKETS.—There have been five weekly market days since our last report, at which the offerings have averaged, 3,718 head: total 18,693. These have about equalled the demand. Snow and ice have prevented the prompt arrival of stock trains and confused the markets somewhat. At the market to-day (Feb. 20), with 3,894 receipts for the week, good nice killing steers have sold at 8¼c.@9c. ₱ lb. estimated dressed weight; the next class 7¾c.@8¼c.; common animals, 7c.@7½c.; and poor thin steers, rough oxen and dry cows, 5½c.@6½c. Most of the sales were between 7¾c.@8½c.; the average being 7¾c.@8c., or a slight advance from five weeks ago. Some extra cattle have been sold at 10c. during the month.

Veal Calves.—Receipts for the past 5 weeks number 1,563, or 312 per week. They have sold readily at ½c. advance or 5½c.@6c. ₱ lb. live weight, for the best calves, and 4c.@5c. for poor to fair veals.

Sheep and Lambs.—Receipts continue about as last month, or 8,020 per week. Market slow, just now at a decline of ½c. ₱ lb., from the figures of last month. Prime fat sheep are worth 4¾c. ₱ lb. live weight, extras 5c. Fair sheep 4½c. Some stock left over.

Live Hogs.—Receipts have fallen off materially since last month, the weekly arrivals being 23,969. Prices have advanced ½c. ₱ lb. Stock selling about as fast as received at 3¾c.@4c. for prime corn-fed hogs.

The Weather, during a month past has been mild for Winter, the mercury at no time falling below 10°. Snow storms have been frequent giving two to three weeks of good sleighing. The changes have been frequent and sudden, with many cloudy or stormy days and the barometer has vibrated much and suddenly, ranging through a full inch.——OUR DAILY NOTES, condensed. read, *January* 21, clear, 1 inch snow at night—22, clear, fine—23, 24, cloudy with 3 inches snow and hail on night of 24th—25, N. E. rain, barometer very low (29.20)—26, 27, clear fine—28, clear A. M., ½ inch snow P. M.—29, fog, light rain at night—30, rain—31, clear, fine——*February* 1, N. E. snow storm, 4 inches—2, clear, fine sleighing—3, cloudy A. M., and 2 inches more snow, P. M.—4, cloudy—5, clear—6, cloudy A. M., rain P. M.—7 to 10, clear, fine, mild—11, clear, ½ inch snow at night—12, fine, warm—13, cloudy—14, clear, fine—15, cloudy A. M., with 1 inch snow P. M.—16, clear A. M., cloudy P. M.—17, rainy P. M.—18, cloudy A. M., clear P. M.—19, snow P. M., thunder shower at night—20, clear, windy.

Rain Fall.—The rain and melted snow for a month ending Feb. 15th, amounted to 5.14 inches.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

JANUARY.

1	.38°	8	.18	15	.28*s*	22	.29*s*
2	.27	9	.35*r*	16	.33	23	.28
3	.18	10	.34*r*	17	.25	24	.30*r*
4	.18	11	.31*s*	18	.32*r*	25	.34*r*
5	.10	12	.33*r*	19	.32*r*	26	.30
6	.17*s*	13	.35	20	.33*r*	27	.26
7	.24	14	.18	21	.31	28	.23*s*

29	.28*r*	30	.36*r*	31	.28	Average 28°	

FEBRUARY.

1	.29*s*	4	.24	7	.38	10	.18
2	.30	5	.24	8	.27	11	.20*s*
3	.20*s*	6	.28*r*	9	.26	12	.33

13	.31		
14	.33		
15	.33		

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(Invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.

Fifty cents per line of *space* for each insertion.
One whole column (145 lines), or more, $60 per column.

GARDENER—SITUATION WANTED.—By a Prussian Gardener, capable of laying out places, managing green-houses, or graperies, and thoroughly acquainted with all the details of a fruit, vegetable, or flower garden. Has good references from former employers in this country. Address F. V., office of American Agriculturist, New-York.

WANTED.—By a young man 19, a situation with an intelligent Working Farmer, to learn the business, N. Y. State preferred. Please address at once,
Box 162 N. Y. Post Office.

A YOUNG MAN, 23 years of age, of New-England birth and habits, possessing experience, energy, and integrity—desires a situation either as foreman of a farm, (Truck or General), or with some successful farmer. He can propagate under glass, and use successfully improved implements. Address HARRISON GRAY, Hallowell, Me.

WANTED—A PRACTICAL NURSERYMAN who understands the business thoroughly. A single man preferred. Address WARFEL & HERR,
Pequea Valley Nurseries, Strasburg, Lancaster Co., Pa.

A. S. FULLER, Horticulturist, Brooklyn, N. Y. Spring Catalogue of Trees, Plants, and Shrubs, including wholesale and retail prices of Grape Vines, now ready. Sent free to all applicants.

S. B. CONOVER,
260, 261, and 262 West Washington Market, foot of Fulton-st., N. Y.
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Garden, Field, Grass, and Flower Seeds of every variety—fresh, pure, and reliable.

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Boston Pine, Brighton Pine, Baltimore Scarlet (very early), Black Prince, Burr's New Pine, Cutter's Seedling (continues a long time in fruit), Hovey's Seedling, Hooker, Hudson, Iowa, Jenny Lind (a valuable early variety), Large Early Scarlet, Longworth's Prolific, M'Avoy's Superior, M'Avoy's Extra Red, Moyamensing, Omer Pacha, Ohio Mammoth, Schneike's Pistillate, Walker, Wilson's Albany, and many others.

The following at 50 cts. per dozen, $1.50 per 100, $10 per 1,000.

Alice Maud, Comtesse de Marne, Duc de Brabant, Fillmore (very good), Golden Seeded, Jessie Read, Kentucky Seedling, Nimrod (large and late), Scott's Seedling (very popular in the market), Trollope's Victoria (very large and late), Vicomtesse Hericart de Thury, &c.

The following at 50 cts. per dozen, $3 per 100, $10 per 1,000.

Alpine Bush White, Alpine Bush Red, British Queen, Bicton Pine (best white), Downer's Prolific, Georgia Mammoth (very promising), Honneur de la Belgique, Triomphe de Gand (in all respects the very best and most profitable).

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Kitley's Carolina Superba, Kitley's Goliah (enormous size and late), Nicholson's Superb, Princess Royal (very promising).

PLANTS BY MAIL.

We will send to any post office address in the country, post paid, and carefully put up so as to carry safely, one hundred good plants of any of the above varieties, at the prices annexed. For instance, 100 Wilson's Albany for $1; 100 Trollope's Victoria, $1.50; 100 Triomphe de Gand, $2, &c.

☞ No orders filled for plants by mail for less than one dollar's worth, of any one kind, and when less than 100 are ordered, *it must be at the dozen price.*

SELECT LISTS OF STRAWBERRIES.

Five Varieties and Five Hundred Plants for Five Dollars.

For $5 we will furnish 100 plants each of the following kinds: Triomphe de Gand, Trollope's Victoria, Burr's New Pine, Jenny Lind and Wilson's Albany.

Ten Varieties and One Thousand Plants for Ten Dollars.

For $10 we will furnish 100 plants each, of the following choice kinds: Triomphe de Gand, Trollope's Victoria, Vicomtesse Hericart de Thury, Fillmore, Downer's Prolific, Burr's New Pine, Jenny Lind, Cutter's Seedling, M'Avoy's Superior and Wilson's Albany.

Seven Varieties and Twenty Thousand Plants for One Hundred Dollars.

For $100 we will furnish 10,000 Triomphe de Gand, 5,000 Wilson's Albany, 1,000 Trollope's Victoria, 1,000 Fillmore, 1,000 Jenny Lind, 1,000 Cutter's Seedling and 1,000 Downer's Prolific.

For the above list, five per cent will be added for boxes and packing.

TRIOMPHE DE GAND.

5,000 for $45, 10,000 for $75, 20,000 for $100. For the $100 lot five per cent will be charged for boxes and packing.

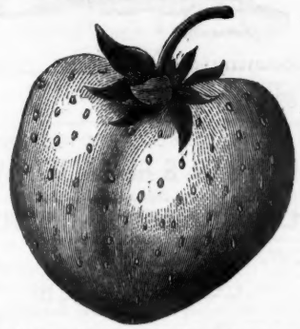
WILSON'S ALBANY.

3,000 for $10. Larger quantities at same rate.

TRIOMPHE DE GAND AND WILSON'S ALBANY.

For $100 we will furnish 10,000 Triomphe de Gand and 10,000 Wilson's Albany. Five per cent will also be charged for this lot, for boxes and packing.

TRIOMPHE DE GAND.



For description of this superb and unrivalled Strawberry, see our Circular. We will furnish this variety, and the Wilson's Albany—the two leading varieties, at the above rates:

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Brinckle's Orange and **Franconia,** $1 per dozen, $5 per 100, $30 per 1,000.

Fastolff, River's Large Fruited Monthly, Knevitt's Giant, Hudson River Antwerp, Red Antwerp, Yellow Antwerp, Allen's Hardy, 75 cts. per dozen, $3 per 100, $25 per 1,000.

Improved American Black Cap, 50 cts. per dozen, $3 per 100, $25 per 1,000.

SELECT LISTS OF RASPBERRIES.

For $10 we will furnish 100 **Brinckle's Orange,** the finest flavored Raspberry, as well as one of the largest, most beautiful, and productive.

100 **Franconia,** a very large red berry, of good flavor, attractive and enormously productive.

100 **Improved American Black Cap,** much larger, more juicy, better flavored, with fewer seed, and every way superior to the common Black Cap. The plant is entirely hardy and very productive, and the fruit is much sought after in the market.

The above kinds include the three colors, orange, red and black, and furnish a pleasant variety in flavor. We regard them as the best for amateurs, and the most profitable for market culture.

For $100 we will furnish 1,000 **Brinckle's Orange,** 1,000 **Franconia,** and 1,000 each of any other three varieties in our general list, adding five per cent for boxes and packing.

On the same terms, we will furnish 5,000 **Brinckle's Orange** or 5,000 **Improved American Black Cap.**

BLACKBERRIES.

New-Rochelle, $1 per dozen, $5 per 100, $25 per 1,000, $100 per 5,000.

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We will send 100 each of the above three kinds for $10.

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Strawberry Watermelon		do.	.25
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*Champion of Scotland, Eugenie and Napoleon Peas, each		do.	.50
Large Sweet Mountain Pepper	per oz. 40c.	per pkt.	.5
*Garnet Chili Potatoes		per bush.	$1.50
French Scarlet Turnip Radish		per oz.	.10
New Madras (edible pod) Radish		per pkt.	.10
Honoluiu Nectarine Squash		per oz.	.30
Fejee Island Tomato	per oz. 25c.	per pkt.	.5
French Upright do.		do.	.15
Berlin Teltau Turnip		per oz.	.10
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*Balsam Fir Seed	do. $2.00	do.	.25
*Ailanthus Seed	do. 2.50	do.	.25
*Honey Locust Seed	do. 60	do.	.10
*Buckthorn Seed	do. 1.00	do.	.10
*Black Austrian Pine Seed	do. 3.00	do.	.25
*Stone Pine Seed	do. 1.50	do.	.15
*European Larch Seed	do. 1.50	do.	.20
*Chinese Arbor Vitæ Seed	do. 3.00	do.	.25
*Virgilia lutea, or Yellow Wood Tree (rare)		do.	$1.00
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6 do.	Pæony Perfection	do.	.50
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12 do.	Truffaut's Globe Perfection	do.	.75
8 do.	Large B'd Dwarf Chrysanthemum	do.	.60
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Callirrhoe pedata (beautiful)	per pkt.	.25
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Mostly Imported the present Winter from the most celebrated French, German, and English Growers,

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I take pleasure in offering to the lovers of beautiful flowers and choice vegetables my New List of Seeds for 1862, imported mainly from the best growers of France, Germany, and England, and which I believe to be unsurpassed by anything ever offered to the American public. My importations embrace all that is old and valuable, as well as everything new and rare, regardless of cost. These seeds are put up in neat packages, offered at a moderate price, and afford the amateurs and the florists of the country a rare opportunity to obtain the floral treasures of Europe as well as the choicest of its vegetable productions.

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NEW AND CHOICE FLOWER SEEDS.—Pentstemon grandiflorus, Callirrhoe involucrata, Abronia umbellata alba, Delphinium gracilis, Bartonia alba.
The above are all NEW flowering plants from Pike's Peak—very showy and desirable—perfectly hardy. Packages of seeds will be sent post-paid to any address for 25 cents each in stamps, or the five varieties for $1. Address
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ELEGANT ROSEWOOD CASE, TWO BANKS OF KEYS.

Price of Five Octave Instrument,..... $200

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This is an entire new idea, and its want has been noticed by all acquainted with Reed Instruments. The old Swell could never be made to operate gradually; the instant the pedal was touched for opening it, the change would be instantaneous and abrupt.
Our NEW SWELL is constructed on scientific principles, and we are satisfied, by our untiring study and experiments, that it is the only one by which the tone of Reed Instruments may be graduated from a mere whisper to the full power of the instrument, and vice versa. The volume of tone is also very much increased by this swell, and is now all that we could desire.
This, in connection with our DIVIDED SWELL, (which we patented in 1855,) will be added to all the Melodeons which we manufacture in the future, and without extra charge.
One other feature in our Melodeons is the IMPROVED VALVE OR PALLET, being a combination of cloth and leather, prepared expressly for the purpose. This valve we have used for the past three years, and we find it to be the very thing that has been so long needed as a substitute for the India Rubber Valve, which has been in use ever since Melodeons have been manufactured, and which has caused so much trouble by the dissolving and sticking of the India Rubber. All of our instruments are now finished with this improved valve, and we can recommend them with confidence.
Persons unacquainted with the Melodeon and its history, will bear in mind that we are the pioneers and leading manufacturers, not only in the United States, but in the world. We commenced the manufacture of Melodeons in the fall of the year 1847, and since that time have finished and sold

TWENTY-SEVEN THOUSAND!

These instruments are now in use mostly in the United States and Canada, but also in Europe, Asia, Africa, South America and the West Indies, and from all these quarters we have the most flattering testimonials of the high estimation in which they are held. At all Industrial Exhibitions they have invariably been

AWARDED THE HIGHEST PREMIUM!

whenever exhibited in competition with others. We shall take pleasure in forwarding by mail (at our own expense) our Illustrated Catalogue, in which every instrument we manufacture is fully described, and illustrated by elegant engravings.
☞ All Melodeons of our manufacture, either sold by us or dealers in any part of the United States or Canada, are warranted to be perfect in every respect, and should any repairs be necessary before the expiration of five years from the date of sale, we hold ourselves ready and willing to make the same free of charge, provided the injury is not caused by accident or design.

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We employ none but the most thorough mechanics, and have never had an apprentice in the establishment.
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The delivering of materials and inspection of work is attended by, first, the general foreman; second, a foreman of machines; third, a foreman and inspector of tuning; fourth, a foreman in the varnishing department: fifth, a superintendent of the reed department.
The duties of the foreman are onerous, it being his duty to select and give out stock, to carefully watch the making of the different parts, keep the departments evenly balanced, and, in fact, to have an eye to every thing, and keep everything straight.
We have mentioned the others to show that the utmost care is taken in every department.

OUR REED DEPARTMENT.—Much of the good quality of the Melodeon depends on having perfect Reeds. It is necessary to have the most perfect machinery to cut, burr, stamp, plane, &c., &c., as well as to use the utmost care in selecting metals, and using proper proportions for the composition of reed metal.
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From the fact that our reeds are celebrated for their uniformity, evenness and sweetness of tone, we very often receive orders for them, or solicitations from manufacturers to supply them with what they require; but as we never sell any part of our Instrument separate, we always decline to fill such orders.
In case the owners of our Melodeon should at any time be so unfortunate as to break a reed, they can, by informing us which it is, receive by return mail a new one properly tuned and ready to put in, free of charge.

☞ Agents for the sale of our Melodeons can be found in all the principal towns of the United States and Canada.
Address either
GEO. A. PRINCE & CO., Buffalo, N. Y.
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Or either of the above Wholesale Agents.

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To be found in this City, all of which will be sold at the lowest prices and on the best terms. All goods warranted as represented. Among my collection may be found every Implement and machine necessary for the FARM or GARDEN, also all kinds of FIELD and GARDEN SEEDS raised especially for my sales and warranted *true* to name.
FERTILIZERS, PERUVIAN GUANO, SUPERPHOSPHATE OF LIME, BONE DUST, POUDRETTE, FISH GUANO, PLASTER, &c., &c.
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HAINES & PELL,
SUCCESSORS TO TREDWELL & PELL.
Agricultural Implements, Machinery, &c., Garden, Field, Grass, and Flower Seeds. Guano, Bone Dust, Poudrette, Phosphate, Lime, &c. Fruit, Ornamental Trees, Shrubs and Plants. For sale wholesale and retail at prices to suit the times.

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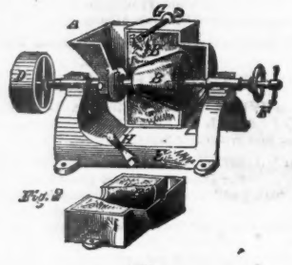

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See *American Agriculturist* for 1861, pages 237 and 268, also page 31, in this volume.
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Ingersoll's Cheap Hand Power Presses for Baling
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These Presses are made for any size or weight of bale required, and delivered on ship board in New-York. Farmers and others wanting such machines are invited to write for Catalogue containing full information.
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We would call the attention of FARMER'S and MERCHANTS to our extensive assortment of PLOWS, consisting of more than a hundred varieties, including the EAGLE, PEEKSKILL, and all approved patterns, and particularly to the

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Draining Spades and Scoops of all sizes.

Fertilizers.—No. 1 PERUVIAN GUANO, ALLEN'S MANIPULATED GUANO, SUPERPHOSPHATE OF LIME, a reliable article, POUDRETTE of the Lodi Manufacturing Co., PLASTER, PURE GROUND BONE, by the tun or barrel.

We always have on hand the largest and best assortment of AGRICULTURAL AND HORTICULTURAL IMPLEMENTS to be found anywhere in the City.

R. H. ALLEN & CO.,
Successors to R. L. Allen.

Chester County Pigs.

The undersigned continues to execute orders as heretofore, for his pure stock of the above, which will be carefully shipped to any point of the Union.

The selections are made only from pure bloods, and chiefly from premium animals, which have been uniformly successful at our local Fairs. He refers to purchasers from him in all sections of the Union.

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Brown's Bronchial Troches were first introduced eleven years ago. It has been proved that they are the best article before the public for Coughs, Colds, Bronchitis, Asthma, Catarrh, the Hacking Cough in Consumptian, and numerous affections of the Throat, giving immediate relief.

Public Speakers and Singers, *will find them effectual for clearing and strengthening the voice.*

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We have established an office at No. 16 South William-st., New-York, for the sale of Rhodes' Standard Manure, and will be represented by Mr. H. E. MORING, to whom dealers will please apply.

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No. 1 Peruvian Guano—Warranted Pure.

Sold at wholesale and retail, at the lowest market price.

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Agricultural and Seed Warehouse,
No. 60 Courtlandt-st., New-York.

Farmers and Gardeners, ATTENTION!

BRUCE'S CONCENTRATED MANURE.

OFFICE 25 PARK-ROW, NEW-YORK.

During the short time this manure has been before the Canadian public, the demand for it both in Canada and the States has so rapidly outran the supply, that the subscriber has been induced to establish a manufactory at *Constable Point, N. J.*, where, with improved machinery and enlarged facilities, they will be enabled to meet promptly all demands; with their knowledge of its materials, and the satisfactory results produced, where ever used, they have to hesitation in putting it before the public as one of the most valuable fertilizers in use. Its composition is such, that while it furnishes food to the growing plant, it improves the soil *permanently*, and puts it in the best condition for the reception of future crops, being in this respect unlike guano, and many other portable manures. *It is a soil improver as well as a plant improver.* It has been tried by various parties competent to form a judgment of its merits, and their testimony has been uniformly in its favor. We have several hundred certificates of Farmers, Gardeners, and Florists, both in the U. S. and Canada. Below is one from Peter B. Mead, Esq., Editor of the Horticulturist:

NEW-YORK, Sept. 17th, 1861.

DUNCAN BRUCE, Esq.; *Dear Sir:*

I have made trial of your Fertilizer during the past season, and the results warrant me in speaking of it in terms of commendation. I have tried nearly all the Fertilizers now in use, but none of them have given me as much satisfaction as your own. It produces a healthy and luxuriant growth, and is quite free from that caustic quality which renders the use of guano and some other fertilizers so dangerous, especially in a dry season. I used your preparation freely on *corn* during the drouth of the past season with good effect. Guano applied in like manner almost literally burned the plants up; I have never on the whole been partial to most of the artificial manures in the market, but my experience with yours, warrants me in saying that it possesses very great value. If possible, you ought to establish a factory here as well as in Canada. Very respectfully yours, PETER B. MEAD,
Editor of the Horticulturist, New-York.

LETTER FROM DOCTOR PENNELL.

DUNCAN BRUCE, Esq.: *Sir:*

I have given your fertilizer a fair trial, and find it an excellent material. It only requires to be once properly used, and then it will speak for itself. I have found it superior to any fertilizer I have heretofore used, and I have applied pretty much all that have been presented.

RICHARD PENNELL, M. D.,
Member of New-York Horticulturist Society.

LETTER FROM GEO. C. THORBURN, ESQ.

I have made repeated experiments, the past season, with Mr. Bruce's Concentrated Manure, and cheerfully recommend it as a most energetic fertilizer of both vegetable and flower plants. It was tried on verbenas, roses, and petunias, as well as a variety of vegetables, which quickly assumed a plethoric growth, and continued vigorous throughout the season. A 4-ounce vial furnished enough for three dozen plants. For Indian Corn, Tomatoes, Egg Plants and Early Potatoes it is capital. GEO. C. THORBURN, Florist.

Newark, New-Jersey.

Send your orders direct to C. W. VAN DOREN, 25 Park Row, New-York. Factory Constable Point, N. J., opposite New-Brighton, Staten Island. The price of the manure is $40 per ton, put up in barrels of 200 lbs. each. We have also bags of 25 lbs. for those having Grape Vines and Flowers in a small way—price $1.

PROVIDENCE COMPANY'S CONCENTRATED BONE FERTILIZER.

This is the best Fertilizer, at the price, ever offered to the farmer.

It is composed of pure bone, ground fine, with other materials added to give it immediate effect.

It powerfully stimulates the plant from the moment the seed germinates until harvest.

It will not only fill the farmer's crib, but will enrich the soil. Try it.

It is packed in good flour barrels, and delivered to vessel or railroad, in New-York City, free of charge for cartage, at the following prices:

For one barrel, $2; two, $3 50; three, $5; four, $5 50; five, $8; six, $9 50; seven and over, $1 50 per barrel.

Two barrels will manure one acre of corn in the hill.

Send your orders, inclosing the cash, by mail, to

GRIFFING, BROTHER & CO.,
No. 60 Courtlandt-st., New-York,
Who are Sole Agents for the United States.

GENUINE

SUPER-PHOSPHATE OF LIME,

Manufactured from **Raw Bones,** dissolved in *Sulphuric Acid,* with a few important additions, *at $40 per tun,* by

A. LISTER & BROTHER, TARRYTOWN, N.Y.

(For results of the present season see *American Agriculturist,* for August, 1861, page 282.)

We guarantee every tun of our manufacture to be of uniform quality, and invite trials or chemical analysis.

We also manufacture from RAW, (OR UNBURNED), BONES, the fine, medium, and coarse ground **Bone Manure,** for lasting as well as immediate effect upon all kinds of farm crops. The coarse ground is particularly valuable for *Fruit Trees* and *Grape Vines,* which require a constant and lasting source of nourishment.

For sale in large and small quantities by

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and their agent, F. LANGMAN, 159 Water-st., New-York.

ONE THOUSAND DOLLARS REWARD.

As Griffing Brothers & Co., were our Agents for two years, and are now advertising Poudrette with their brand, relying upon the reputation of the THE LODI MANUFACTURING CO., and the fact of having once been our Agents to assist them in the sale of it. And as it is difficult for people to discriminate always between the two,

I hereby offer a reward of One Thousand Dollars to any person who can discover any other Manufactory of real or pretended Poudrette, other than THE LODI CO.'S *the entire buildings* of which will *even contain the hoops only* that the LODI MANUFACTURING CO., put upon their barrels in the course of *one year*—said Factory to be within 100 miles of New-York City.

JAMES R. DEY,
Prest. Lodi Manufacturing Co.

150,000 BARRELS POUDRETTE.

Send your orders early, and you will be sure to get them filled. Address GRIFFING, BROTHER & CO.,
Agricultural and Seed Warehouse,
No. 60 Courtlandt-st., New-York.

100,000 Barrels

OF THE

LODI MANUFACTURING COMPANY'S

POUDRETTE,

FOR SALE BY

JAMES T. FOSTER,

No. 66 Cortlandt-st., New-York.

The large facilities which they enjoy by exclusive contract for all the night soil of the City of New-York, and large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking *cost* and *yield* into consideration. It will be sold at the usual price of $1 50 per barrel for seven barrels or over, delivered free in New-York City.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-st., to No. 66 CORTLANDT-ST.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call the attention to the following experiences of practical farmers, in different sections of the country:

NORTH PEMBROKE, Mass., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphospate of Lime, etc., with indifferent success, in the Spring of 1860 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last Spring I procured from your branch office in Boston about thirty barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as has been heard from, has given universal satisfaction. To further test the efficacy of your Poudrette, this season I ploughed about two acres of light, sandy soil, which had laid in grass about six years, (the last crop of grass being very light.) This I planted with corn and potatoes, applying about four and a half barrels of Poudrette, with no other manure, except a handful of ashes to each hill at the first hoeing, and from present appearances we shall have a better crop than on a field of like soil where we applied twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully, yours,

HORACE COLLAMORE.

MERRILL, Me., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sirs—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in using the first, I got sick of it and sold the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor, who bought the other barrel, says if he had bought five barrels more, he would have saved the price of twenty barrels.

Yours, &c.,
V. B. PAUL.

WALDO, Me., Oct. 12, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—Last Spring I bought of Cross and Newell one barrel of your Poudrette as an experiment, but with very little faith in its utility. I put it on six rows of corn in different parts of the field, after manuring with barn-yard manure, in the usual way—at the second time hoeing. Where I put the Poudrette the corn was twice as large as the rest of the field, and this now is one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for raising corn in this country, and shall use it more extensively another year.

Yours, &c.
WELLINGTON SHOREY.

SMYRNA, Del., Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette in each hill. I left out a part of two rows, and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season; and where the Poudrette was used, the corn was decidedly the best, and I have no hesitation in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it.

Yours, respectfully, JOHN G. BLACK.

CHESTER, Pa., Sept. 15, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette and one bag of Phuine, which I put on my corn. I marked the place where I put the Phuine, which, when started, seemed ahead, but now the corn where the Poudrette was on is much the best. Last year I used Allen & Needle's new Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use.

Yours, &c.
A. R. PERKINS.

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address,

JAMES T. FOSTER,
Care of Lodi Manufacturing Company,
66 Cortlandt-st., N. Y

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Premiums for Northern Grown Cotton.

One Hundred Dollars are offered for the best five specimens of cotton grown above latitudes 38° and 42°, this year. See particulars in February *Agriculturist*, page 64.

Subscriptions Still Date January 1st.

Unless otherwise specially ordered all new subscriptions received before June 20, will be entered from January 1st, and the back Numbers be forwarded.

Two Thousand for a Dollar! Twenty for a Penny!

Perhaps it may not be amiss to call the attention of those of our readers making up clubs, and of all those kind friends who are disposed to bring the *Agriculturist* to the notice of their neighbors, to a fact or two. Every number of the *Agriculturist* contains from **150** to **200** distinct articles and items, not reckoning the various suggestions in the Calendar of Operations. At the lowest calculation therefore, the current volume will alone contain over Two Thousand different articles, or suggestive items, the whole of which cost but a single dollar, or twenty for a penny. Now can any one fail to find among all these two thousand paragraphs, one or more hints that shall be worth more than a dollar—to say nothing of the amount of general information derived from reading the whole? To test this question, let any one who has read this or any other good journal for five years (or even one year) ask himself or herself, what would be my present information had I been without any of this reading. Our information is accumulating, and our modes of action are being daily changed, without our knowing how or why.

Those Good Premiums

Are still available to all. The descriptions (see page 90) are necessarily cut short in this paper. This month will afford a good opportunity to fill up incomplete premium lists, and to start new ones. The unusually large distribution of good seeds are no small incentive to new subscribers. We think this and the preceding two numbers are a sufficient guarantee that every subscriber will get his money's worth this year, to say nothing of the seeds "thrown in." ☞ Any person hereafter sending in new names not to go on any premium list, may, if desired, order an extra portion of seeds for himself.

A Good Lot of Advertisements.

The advertising pages are *well* filled, both in quantity and quality, and the reader will doubtless be well repaid for looking through the whole of them, to see *what* is offered, and *where*. (They are arranged in the pages somewhat at the convenience of the printer, and one page is likely to be as *new* and as good as any other.) No better or more select class of advertisements, as a whole, ever appeared in any paper. We could have readily filled the whole of this number, had we not shut out that large class who can afford to pay best, and advertise most, because they give the least for the money. We scarcely found room for the good advertisements that were up to time—a strong indication of the revival of business hopes.

Note to Advertisers.—We want no advertisements but good ones—those from parties who will honestly do all they advertise to do, at least. Distant parties, unknown to us personally, or by good repute, should send with their favors some indication of their good standing where they are known. In illustration, John Smith, of Western Minnesota, sends a glowing description of a new plant, which he offers at $1 each. We never heard of him or his new plant, and how are we to know that it is not a catch-penny, or catch-dollar affair? We don't want to be accessory to any imposition upon our readers, and so must return the advertisement and money, though it may be all right. We mean to make our advertising pages as valuable for their selectness, as they are for the number of subscribers which they reach. On this latter point we are happy to say that the receipts of subscribers this year, so far, exceed those of any former year, and that the circulation of the *Agriculturist* is undoubtedly *far* ahead of that of any other similar journal in the world.

Mail-Lost Numbers Supplied.

It is hard for the Publisher to alone bear all the losses arising from the carelessness or over-sight of any of the 18,000 Postmasters and carriers who have the handling of the *Agriculturist* between the office and the subscribers. But since Uncle Samuel monopolizes the carrying business, and won't stand any losses, and we can't compel him to, we shall cheerfully send a second copy of any number when the first one mailed fails to reach its proper destination, on being notified of the fact. We suspect from the reports, that one of the packages sent to Providence, R. I., last month, has not got there yet. Let us know who are without that Number.

CLUBS

Can at any time be increased, by remitting for each addition, the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will of course be sent to added names.

Special to Postmasters—About Postage.

We have recently received four letters from four Postmasters. Two of these tell us very abruptly they "don't care anything for what editors say about postage;" they "get their instructions from Washington, and not from editors." *Query:* Do they ever learn *anything* from editors? Did they ever ask or receive any help from editors in getting their appointments? Well, as they have appealed to Washington, we have sent their letters there, and they will doubtless *hear* from them. The other two are polite letters, evidently written by men who are popular and obliging officers at home, though we have not the pleasure of their personal acquaintance. They say, "You are right in announcing that the postage on the *Agriculturist* is *six cents a year* when it weighs 3 ounces or less, but we weighed some numbers on very accurate balances, and when dry, and without wrapper, they still went *over* 3 ounces each. We therefore feel obliged to charge 12 cents a year, paid in advance." This is doubtless so, for after long searching, we have found a copy that weighs 3¼ ounces. It can only be accounted for in this wise, viz.: that at the paper mill, in starting on a new lot, a few sheets of uneven thickness run off before getting the pulp feeder exactly gauged, and whoever chances to weigh copies printed on these few sheets will find them over 3 ounces. We will repeat, that for years past we have only paid for 44 pounds per ream of 500 sheets (not 480,) which makes 88 pounds for every 500 copies of the paper, there being 2 sheets in each number. A little calculation will show that this is only 2 and 816-1000ths ounces to the copy, or allowing for weight of ink, the weight of each number is *less* than 2 and 9-10ths ounces. As our contract requires the paper to be made of uniform weight, and as the manufacturers would not be very likely to give us over 44 pounds to the ream when we never pay for over 44 pounds, there is no danger that our numbers will overrun the three ounces, as a general rule. We respectfully ask our friends, the Postmasters, to look into the matter, and try the weight again, before charging beyond the one cent per copy, or *six cents a year*, if postage be paid quarterly or yearly in advance.

Bound Volumes—Binding—Covers.

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